ENVIRONMENTAL SENSING EVALUATION OF ATTAINED PERFORMANCE

ESSETS

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ENVIRONMENTAL SENSING EVALUATION OF ATTAINED PERFORMANCE

ESSETS

Environmental
Sensing
Selection
Evaluation and
Training
System

Carla de Haas

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American Institutes for Research
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The research reported herein was prepared with the support of the Bureau of Education for the Handicapped, U.S. Office of Education under Grant No. G007604405. Grantees undertaking such projects under government sponsorship are encouraged to express freely their professional judgement in the conduct of the project. Points of view expressed do not necessarily represent official position or policy.

ISBN 0-89785-577-9

Prepublication edition;
not to be copied in any form

1978

INTRODUCTORY COMMENTS AND ACKNOWLEDGMENTS

Having been continuously involved for about five years with various aspects of research and development related to the blind and visually handicapped, I am impressed with how much we do know, and could better share, about ways blind persons' daily living skills and orientation and mobility skills can be enhanced. At the same time, I believe that progress has been hampered by a lack of methodological consistency in training and evaluation.

The ESSETS materials have been developed with the hope that evaluation and training could become more systematic and more effective. It is fair to say that they could not have reached their present level of detail and comprehensiveness without the expertise of Carla deHaas, whose orientation and mobility background and electronic travel aid familiarity have been invaluable. Similarly, the appearance of these materials (intended for eye appeal as well as ease of use) is in large measure the result of the secretarial skills of Angelica Hampel and the graphics efforts of Len Lutomski and Don Reed. All revisions were coordinated and blended by Anatta Blackmarr, Barbara Pletcher and Barbara Milligan.

The following individuals affiliated with other organizations have been helpful to the project in a variety of ways. We thank them for their suggestions, efforts, and support. Field tryouts: Eddie Robinson, South Carolina Commission for the Blind; Bob Scheffel and Sam Hines, Atlanta Area Services for the Blind; Joey Baumbach, Northern Arizona University; Carol Seidberg, Arizona Industries for the Blind, Phoenix. Reviews of materials were given by Berdell Wurzburger, San Francisco State University, and Lee Farmer, Veterans Administration. Additional helpful information was provided by Bob Smith, Boston College; Stan Suterko, Western Michigan University; and Greg Goodrich, Veterans Administration.

Within the narrative text portions of this material we have used both the masculine and feminine forms of the pronoun wherever possible. However, readers will note that within the exercises we have faced restrictions of space and format that have precluded our use of the he/she variant of terminology. For expedience, we have chosen to use the masculine in such instances. In no way do we mean to imply sex bias through this choice.

It should be kept in mind that though these materials were developed primarily for mainstreamed secondary and college-level blind individuals they could also be used with adult blind persons receiving instruction through rehabilitation agencies. Some adaptation of the materials for young children (i.e., age 5) has been attempted though it is not reflected in these published materials. Certainly, alternative versions of these materials are needed for young children, for the visually impaired geriatric population, and for persons having low vision.

We would hope that systematic techniques that may be developed for those populations will be similar in concept to those utilized in the present ESSETS materials. Eventually, this should lead to a fully comprehensive approach to training and evaluation.

Robert A. Weisgerber, Ed.D.
Project Director

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GENERAL INFORMATION

- AN OVERVIEW OF ESSETS COMPONENTS AND ACTIVITIES
- DESCRIPTION OF THE PERFORMANCE EXERCISES
- GLOSSARY OF TERMS AND ABBREVIATIONS
- TRAINEE PROFILE SHEET

AN OVERVIEW OF ESSETS COMPONENTS AND ACTIVITIES

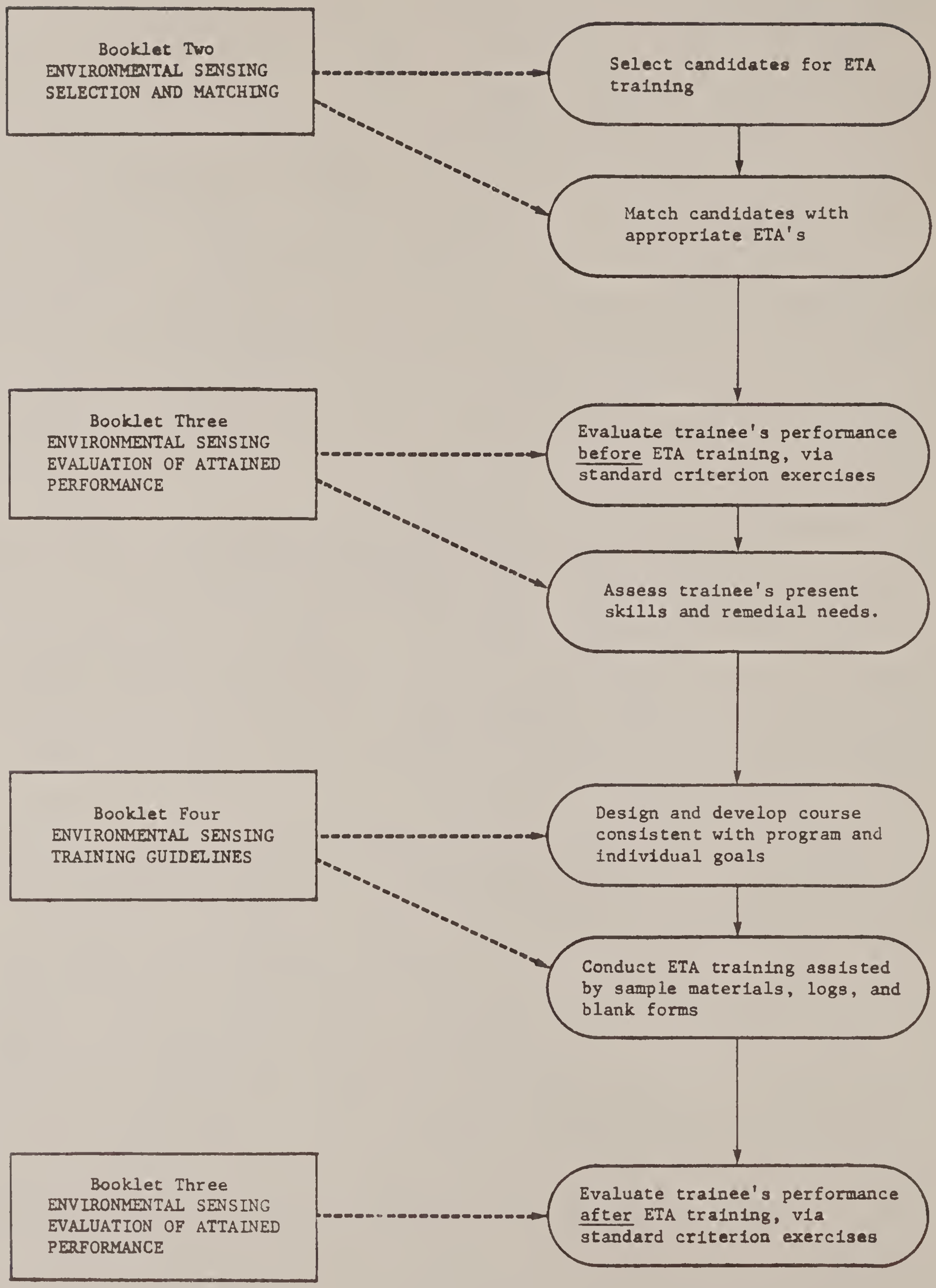
The Environmental Sensing, Selection, Evaluation, and Training System, or ESSETS, has four components, the first of which is a manual entitled Environmental Sensing Reference Compendium. In its 100 pages, plus glossary and index, it presents environmental sensing skills and their components in outline form, organized under eight topical areas: Topical Area I, Relating Body-Image and Surrounding Space; Topical Area II, Perceiving and Defining the Environment; Topical Area III, Relating Personal Movement to Environmental Factors; Topical Area IV, Relating Personal Movement to Distance, Time, and Rate; Topical Area V, Compiling a Cognitive Map; Topical Area VI, Planning, Executing, and Assessing Travel Routes; Topical Area VII; Optimizing Travel Performance; Topical Area VIII, Analyzing Personal Attributes for Greater Independence.

The second component, a manual entitled Environmental Sensing: Selection and Matching, has two parts. Part A emphasizes selection of ETA-training candidates. It includes material on "Physical/Medical Factors," "Internal Motivations," "External Influences," "Cost Considerations," and "Readiness Assessment." Part B emphasizes matching the individual trainee with the ETA best suited to him or her. It consists of a series of Matching Trials for each of five ETAs.

Component three, entitled Environmental Sensing: Evaluation of Attained Performance, consists of a series of standard criterion exercises that offer a means of contrasting the trainee's performance before training, with his or her performance after training. When used in combination with the scores in the matching section of component two, these measures also differentiate existing skills from skills to be emphasized during training. Because of their design, the ESSETS exercises can be implemented at a variety of training locations, using simple, readily available set-ups.

Component four, entitled Environmental Sensing: Training Guidelines, involves sample lesson plans and general procedures for developing instructional strategies. It builds on information from components two and three. Emphasis is given to self-orientation skills (that is, the ability to orient oneself to a new environment independent of formal instruction), and to cooperative goal-setting by the trainee and instructor.

ESSETS COMPONENTS AND ACTIVITIES MODEL


Booklet Two
ENVIRONMENTAL SENSING
SELECTION AND MATCHING
Select candidates for ETA training
Match candidates with appropriate ETA's
Booklet Three
ENVIRONMENTAL SENSING
EVALUATION OF ATTAINED PERFORMANCE
Evaluate trainee's performance before ETA training, via standard criterion exercises
Assess trainee's present skills and remedial needs.
Booklet Four
ENVIRONMENTAL SENSING
TRAINING GUIDELINES
Design and develop course consistent with program and individual goals
Conduct ETA training assisted by sample materials, logs, and blank forms
Booklet Three
ENVIRONMENTAL SENSING
EVALUATION OF ATTAINED PERFORMANCE
Evaluate trainee's performance after ETA training, via standard criterion exercises

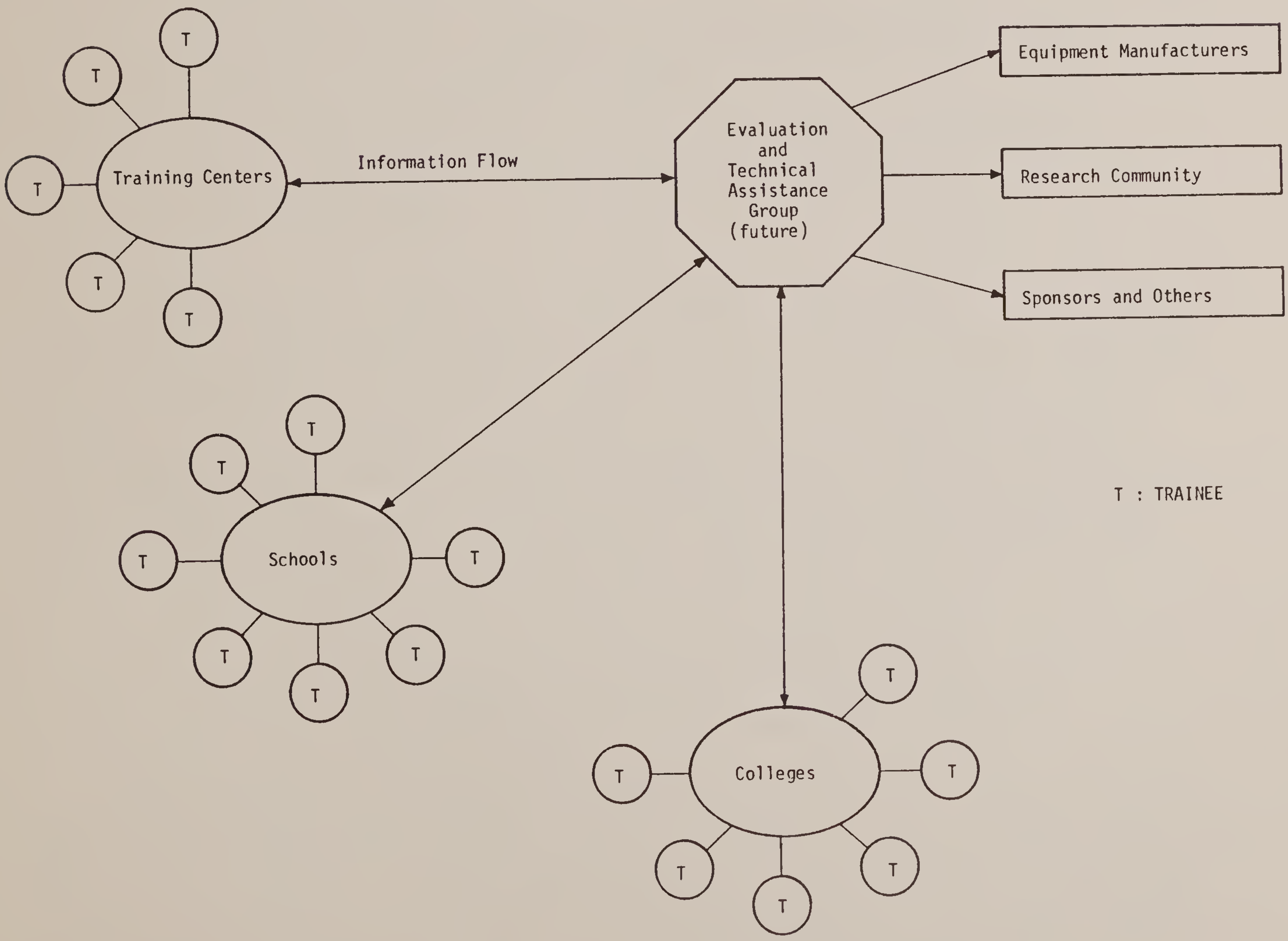
Note: Booklet One, ENVIRONMENTAL SENSING REFERENCE COMPENDIUM, is a companion document which can serve as a useful reference for environmental sensing behaviors and processes throughout.

The ESSETS approach, if widely adopted and implemented, could enable the pooling of information from a cross section of training locations across the country to allow meaningful and practical analysis and interpretation. This information would naturally lead to validation or further refinement of specific exercises now contained in the ESSETS approach.

To the extent that a number of schools, colleges, and training centers (e.g., rehabilitation centers, agencies) utilize the approach and share their separate results, their accumulated experience could become a valuable resource for other concerned groups, such as equipment manufacturers who seek information that will help them to develop improved technology and for sponsors of service programs who want to know how trainees were benefited. Diagrammatically, the process model will be as follows.

The Essets Process Model

A Plan for Long Term Sharing of Information



DESCRIPTION OF THE PERFORMANCE EXERCISES

Performance Exercises are ways of testing trainee performance, that is, the extent to which the trainee is able to carry out specific skills associated with environmental sensing in order to establish and maintain orientation, travel, or accomplish other activities. The development of these skills is a gradual process, and very much depends on the trainee's present skills (and maturity), training goals, and the amount of training time that can be scheduled. Clearly then, pre-testing without the ETA is necessary in order to establish beginning levels of skill preceding training. Such pretesting will:

- help to identify areas where the individual already performs well and may not need much, if any, ETA supplemental help
- help to focus on strengths and weaknesses that should enter into training decisions
- help the trainee and instructor to estimate the level of effort that will be needed to reach particular training goals

Training normally proceeds from relatively simple tasks to more complex tasks, and is often organized according to the different kinds of settings which the trainee will encounter in real life following training. This suggests that the assessment of learned skills can also be incremental. Thus, post-testing of performance following training with the ETA can give the trainee and instructor a clear idea of the progress being made. Such post-testing will help to establish newly developed skills in:

- structured settings involving controlled travel
- semi-structured settings involving intermediate travel
- unstructured settings involving independent travel

When training is complete it is important to know what overall skills have been developed along the way, i.e., a summary of skills demonstrated at each training level. It also means that skills not satisfactorily achieved at the time a level of training was post-tested should be retested prior to the individual's departure from the training center or program. Such re-testing will:

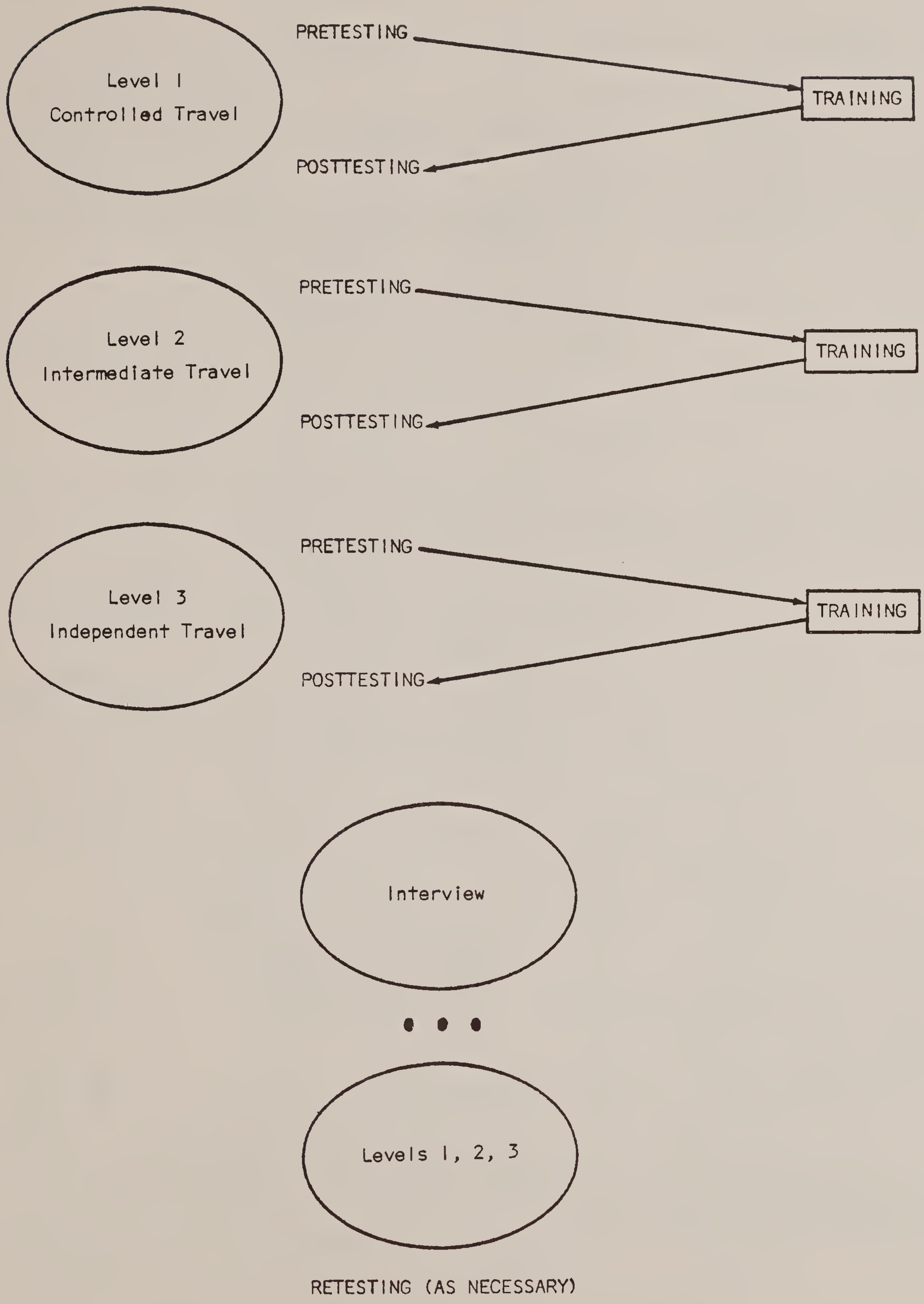
- establish the extent to which interim performance deficiencies have been corrected or still remain
- establish the overall performance competencies developed during the course of training

Finally, the outcomes of training are not always easy to anticipate. Sometimes they are more in the realm of feelings, such as self- confidence, and other factors that are not easily observed. Accordingly, provision should be made to interview the trainee and obtain information on outcomes that go beyond the intended training.

The ESSETS evaluation of attained performance as contained in this booklet is designed to deal with these various evaluation requirements. These materials are organized in three sections, corresponding to different levels of travel. Each section is linked to recommended training guidelines.

The overall strategy for evaluating performance is illustrated on the following page. Subsequent pages give an example of a Performance Exercise filled out for a hypothetical trainee. Notes explain problems that led to inadequate post-test performance. In this example retesting was necessary on only one item.

Performance Evaluation Strategy



Example

Lists instructional outcomes emphasized.

- ABILITY TO USE PUBLIC TRANSPORTATION
- ABILITY TO TRAVEL WITH INCREASED EFFICIENCY AND SAFETY
- ABILITY TO TRAVEL WITH A MINIMUM OF DEVIANT PERIPATETIC BEHAVIOR

EXERCISE 4

LEVEL 2

Setting:

Outdoor. An unfamiliar route of about 1 block in a quiet residential area. There must be a mailbox (large, not pole-mounted) in the outside shoreline. There must also be some poles/trees in outside shoreline, but none should exceed one-half the width of the mailbox. The last object in the outside shoreline will be a bus-stop pole (any pole similar to a bus-stop pole will do).

Describes the situation and intent.

Conditions:

Trainee will locate both a mailbox and a bus-stop pole on the basis of minimal verbal orientation to their locations. The mailbox will be in the outside shoreline about ½ block from his starting point. The bus-stop pole will be the last object in the outside shoreline. Trainee will attempt to detect and locate mailbox prior to making cane contact with it. The trainee will then continue along, trying to locate the bus-stop pole prior to making physical contact with it. He will then attempt to walk up to the pole and grasp it.

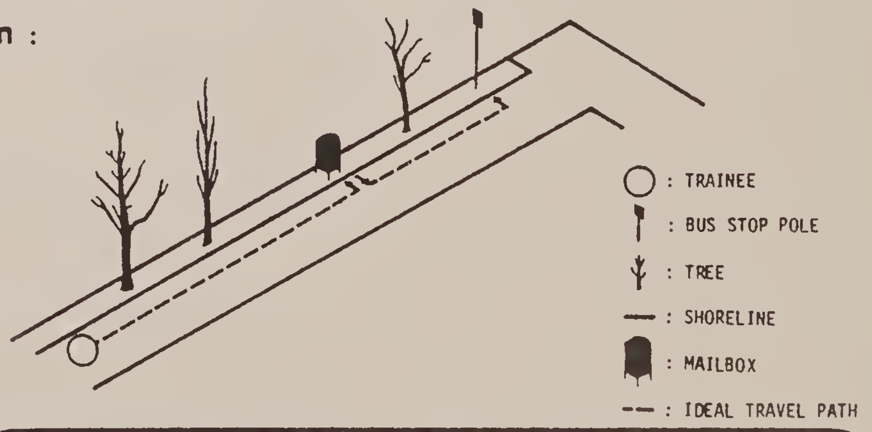
Purpose:

1) Test trainee's ability to detect and locate a specific laterally placed object in an unfamiliar area after receiving minimal verbal orientation to object's location.
2) Test trainee's ability to detect and locate such an object prior to cane contact or body contact with it.
3) Test trainee's ability to maintain a straight line of travel while seeking such an object.
4) Estimate time needed for trainee to locate several such objects (within a 1-block area).

Diagram :

VARIATION

Illustrated sequence of actions. "Variation" indicates one possible arrangement.



Test Location: corner 3rd + Elm

Place where exercise is conducted.

Example

Lists items needed.

DATA RECORDING

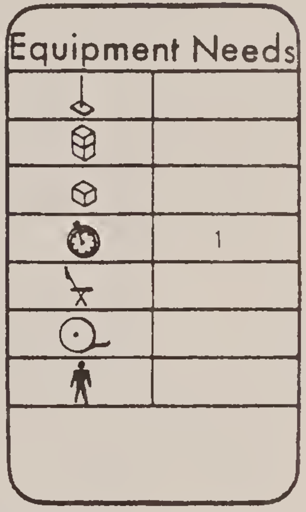
(L2)

Pre-Test (D01)
Date 9/20/78
Specify aid used
Long cane

Post-Test (D02)
Date 11/07/78
Specify aid used
Laser Cane

Re-Test (D03)
Date 11/07/78
Specify aid used
Laser Cane

Test date record and aid used.



Notes/Remarks: Continued habit of trailing. Decided to retest for D05.

(D04)

Explanations.

Examiner's Instructions:

Guide trainee to starting position. SAY: "I'd like you to walk along this block. In the outside shoreline there are a few slim poles/trees. There is also a mailbox and a bus-stop pole. I'd like you to find those two things. First find the mailbox, then go up to it and put your hand on it. You may use any technique you wish except soliciting aid. If you think you detect the mailbox before making cane contact with it, please stop and tell me. Tell me where you think it is before going on to make cane contact with it. The last object in the outside shoreline is the bus-stop pole. After you've found the mailbox, please continue along the block and find the bus-stop pole. Remember that there are a few other poles/trees in the outside shoreline. Are the instructions clear? Please begin."

(SCORE ITEMS D05 - D11 AS TRAINEE EXECUTES EXERCISE. SCORE ITEM D12 AFTER TRAINEE COMPLETES EXERCISE.)

Gives standard directions to be followed.

Criteria	Pre	Post	Re
D05 Trainee detects mailbox without trailing with cane.	no	no	yes
D06 Trainee indicates detection & location of mailbox before making cane contact.	no	yes	
D07 Trainee maintains an essentially straight line of travel while seeking the mailbox.	yes	yes	
D08 TOTAL TIME ELAPSED SINCE TRAINEE BEGAN SEEKING MAILBOX	1'30"	45"	
D09 Trainee does not mistake another object for the bus-stop pole.	no	yes	
D10 Trainee locates bus-stop pole and makes body contact with it.	no	yes	
D11 Trainee maintains essentially straight line of travel while seeking pole.	yes	yes	
D12 TOTAL TIME ELAPSED SINCE TRAINEE BEGAN SEEKING BUS-STOP POLE.	30"	15"	

Describes what happened in exercise.

CONSTRUCTION OR ACQUISITION OF NEEDED MATERIALS

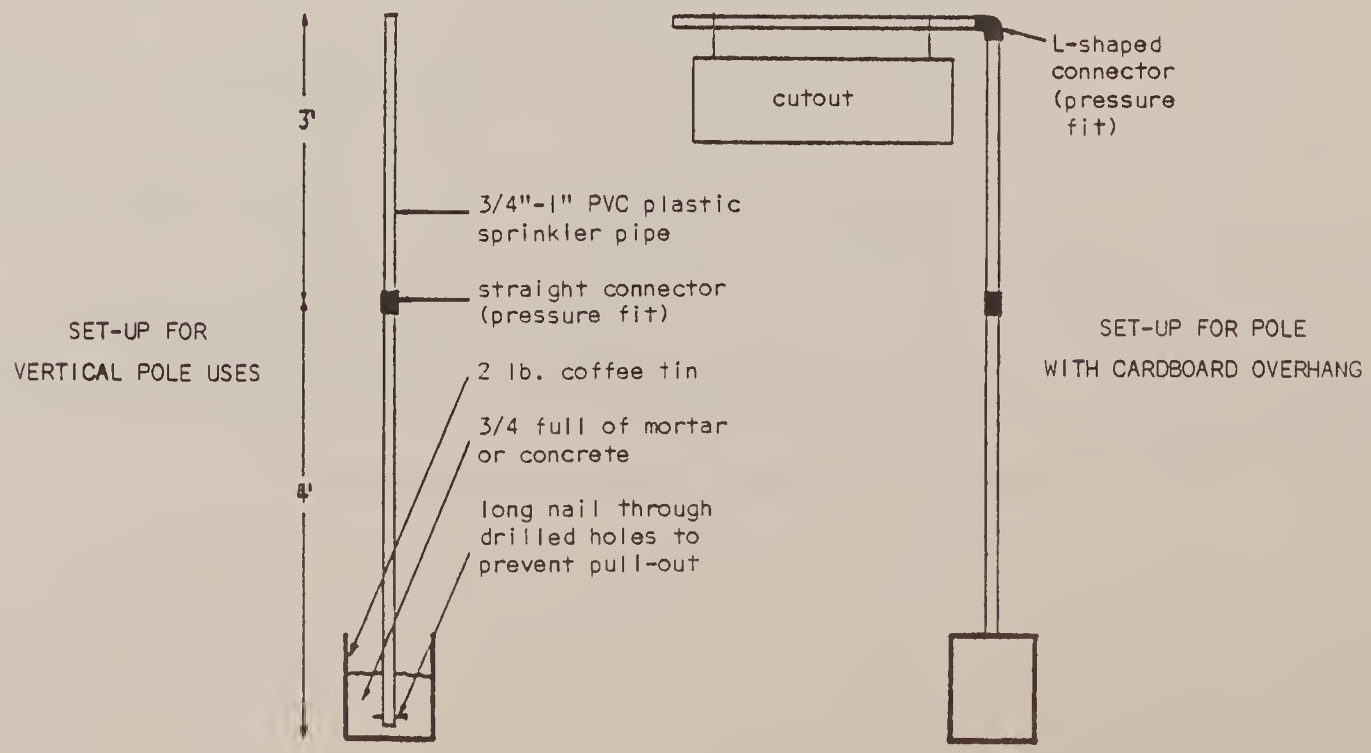
Most of the items listed in the exercises are of a standard nature, easily located in the community or at the training center.

Stacks of cartons refers to empty cardboard boxes (such as canned goods boxes often available at grocery stores) which should be roughly 1 1/2 x 1' x 1' . For use in the Performance Exercises, they are stood on end, so that each carton is about 1 1/2' high. Thus, for example, when instructions require 1 stack of cartons, the examiner will place one carton on top of another carton to produce an "obstacle" which is about 3' high x 1' wide.

Cardboard cutouts refers to pieces of cardboard 1' x 3' in size. They need not be heavy cardboard, with ordinary scissors, they can be easily cut from an old cardboard dress box or a piece of poster board.

The measuring tape (shown in Equipment Needs box as ⊙) most useful for Performance Exercise setups is a carpenter's measuring tape that will extend to 6' or more, and that has a feature allowing the tape to be "locked" at the desired extension during use.

Poles refers to portable poles which can be locally fabricated using readily available materials as shown in the diagram below. (If the examiner already has a set of poles of the type used in ETA training, they are quire acceptable for use in the Performance Exercises whether they are made of wood, metal, or PVC tubing.)


3'
4'
3/4"-1" PVC plastic sprinkler pipe
straight connector (pressure fit)
2 lb. coffee tin
3/4 full of mortar or concrete
long nail through drilled holes to prevent pull-out
SET-UP FOR VERTICAL POLE USES
cutout
L-shaped connector (pressure fit)
SET-UP FOR POLE WITH CARDBOARD OVERHANG

COMPARISON OF
EVALUATION OF ATTAINED PERFORMANCE
AND REFERENCE COMPENDIUM TOPICAL AREAS

	Reference Compendium Topical Areas and Subtopics							
Performance Exercises:	I	II	III	IV	V	VI	VII	VIII
Level 1								
Ex. 1	B	A,C	A					
Ex. 2	B	A,C	A,D					
Ex. 3		A,C,D	A,B,F					
Ex. 4		A,B,C,D,H					B	
Ex. 5	B	A,B,C,D,H	C,D		A		A,C	
Ex. 6		A,C,D,H	B,E,H				E	
Level 2								
Ex. 1		A,B,C,H	D				B,E	
Ex. 2		A,B,C,D,H	C,D,E,F		A,C,E	A,B		
Ex. 3		A,B,C,D, E,G,H	D					
Ex. 4		A,B,C,D, E,H	C,D,E		A	A,F	A,B,C,E	
Ex. 5		A,B,C,D,H	B,F				B,C	
Ex. 6		A,B,C,D, E,H	B,E,F		A	A	A,B	
EX. 7		A,B,C	C,D		A,C		A,B,C,F,G	
Level 3								
Ex. 1		A,B,C,D,H	A,B,D,F		A,C	H	B,C	
Ex. 2		A,B,C,D,H	E,F			A,I	A,B	
Ex. 3		A,B,C,D,H	A,C,D,E F,G		A,D	A,B,D,F, H,I	A,B,E,G	
Ex. 4	B	A,B,C, D,H			A,B,D	A,B,F,G	A,B,E,F	
Ex. 5		A,B,C,D,E,H	A,C,F		A,B,C,E	A	A,B,D,F	
Ex. 6		A,B,C,D,H	A,B,C,D, E,F		A,C,E	A,B,D,F, H,I	A,B,D,E,J	
Ex. 7		A,B,C,D, G,H	A,B,C,D,E,F,G		A,B,D,E	A,B,C,D,F,H,I	A,B,C,D,F, G,H,I	
Ex. 8		A,B,C,D,G,H,	A,B,C,D, E,F,G		A,C,D,E	A,B,D,F, H,I	A,B,C,D,F,J	
Interview								

INSTRUCTIONAL OUTCOMES CITED IN PERFORMANCE EXERCISES

- ABILITY TO CONTROL/CORRECT VEER

  An ETA could be expected* to provide information about environmental elements beyond cane-reach. The traveler with a tendency to veer could significantly decrease this tendency by using the increased environmental input to check the direction of the line of travel. If the traveler does veer ETA-provided information (about shorelines, etc.) should reduce the amount of time needed to re-orient, and/or re-establish the desired line of travel.

- ABILITY TO ESTABLISH AND MAINTAIN ORIENTATION

  This is a comprehensive objective against which one can measure the traveler's success in applying several ETA-enhanced skills in combination as the situation requires. Specific contributing ETA-enhanced skills include: use of landmarks; ability to transfer environmental element recognition among typical environments; increased control in interactions with sighted public; use of ambient sound.

- ABILITY TO TRAVEL WITH INCREASED EFFICIENCY AND SAFETY

  This is the most comprehensive objective bulleted in the Performance Exercises. To wholly achieve it, ETA mastery and commensurate ETA-enhanced skills should be added to generally good orientation and mobility skills. All orientation and mobility skill improvements contribute to this objective. It is bulleted on some of the more complex Performance Exercises and gains toward its achievement usually appear on those tests as number scores in the criteria for assessment.

  Device input could be expected* to enable the user to avoid or significantly reduce contact with obstacles in his/her path, and to use both near and distant lateral objects as landmarks and continuous progress towards his objective. Device-supplemented warnings on the location of drop-offs and overhangs increase the traveler's safety, just as advance warning of in-path pedestrians increases general safety. All of this contributes to efficient travel, and should diminish stress and anxiety felt during travel. It may also increase confidence, allowing the traveler to lengthen his/her stride or quicken his/her pace.

---

*to an extent determined by the ETA's inherent design limitations

- ABILITY TO TRAVEL WITH A MINIMUM OF DEVIANT PERIPATETIC BEHAVIOR

  This is a comprehensive objective. An ETA could be expected* to increase the traveler's ability to maintain a straight line of travel because it provides information on lateral elements beyond cane-range, thus reducing the traveler's need to establish/maintain cane- or hand-contact with the shoreline in order to locate a specific element in that shoreline; it allows a traveler to train a cluttered shoreline at such a distance that he/she need not constantly adjust his/her line of travel to circumvent objects protruding from the shoreline; it allows the traveler to monitor the shoreline or landmarks for purposes of orientation without moving close enough to make cane- or hand-contact with the shoreline/landmarks. The ability to detect landmarks beyond cane range can also assist the traveler in maintaining a straight line of travel when traversing an area without definite shorelines (e.g., crossing a street).

- ABILITY TO TRANSFER ENVIRONMENTAL ELEMENTS RECOGNITION AMONG TYPICAL ENVIRONMENTS

  An ETA could be expected* to provide supplementary information on location, size, and nature of elements in the environment, thus enhancing the traveler's ability to identify environmental elements through matching perceived properties with expected properties. Once he/she has learned expectations and ETA-enhanced ability to recognize elements typical of various types of environments, the ETA-assisted traveler could be better equipped than the long cane traveler to orient rapidly to new environments of a familiar type, and to travel in them with increased poise and efficiency

- ABILITY TO USE PUBLIC TRANSPORTATION

  ETA use could be expected to supplement ambient sound and information on the location of: a transportation "stop"; vehicle doors; other passengers entering, leaving, or in line; a fare box. The device could generally help improve the traveler's orientation to the exterior and interior of the vehicles.

- AVOIDANCE OF OBSTACLES

  ETA use could be expected* to increase the traveler's ability to avoid both stationary and moving obstacles, eliminating obstacle-body contact and greatly reducing obstacle-cane contact. Even unavoidable overhangs could produce an advance warning, enabling the traveler to prepare for possible physical contact and thus pass safely. All of the above should result in smoother and more continuous progress towards an objective, and a deduction of stress felt by the traveler.

---

*to an extent determined by the ETA's inherent design limitations

- INCREASED CONTROL IN INTERACTIONS WITH SIGHTED PUBLIC

  ETA use could be expected* to improve the traveler's ability to detect and locate other people for purposes of avoiding collision, seeking an encounter, taking his/her place in a line, "tracking" the direction of their movement while he/she remains stationary or mobile.

- USE OF AMBIENT SOUND

  ETA use could be expected* to contribute to the traveler's ability to use ambient sound. An ETA may be used to confirm information deduced from ambient sound, or to provide useful additional information on the location and physical properties of a sound-source. In some cases, an ETA may provide a meaningful substitute for well developed auditory awareness or echolocation skills. (Note: If the ETA user becomes too device-oriented, allowing device signals to supercede rather than enhance ambient sound, he/she may lose valuable environmental information.)

- USE OF/INTERACTION WITH SHORELINE

  ETA use could be expected* to increase the traveler's ability to maintain desired orientation to, and convenient distance from the shoreline (straight, curved, or cluttered) without cane contact. While doing this, ETA use could also enable the traveler to detect height, width, openings, and other changes or elements in the shoreline. Detection of and information about laterally placed elements becomes more accessible, and self-familiarization with new areas should be facilitated.

- USE OF LANDMARKS

  ETA use could be expected to increase the number of environmental elements accessible and appropriate as landmarks, and reduce the amount of time and contact needed for detection and confirmation of landmarks. This could increase the traveler's ability to select/determine landmarks for future use in previously unfamiliar areas, enabling him or her to receive, respond to, and communicate more information about his or her environment; increased continuity of orientation should result.

---

*to an extent determined by the ETA's inherent design limitations

GLOSSARY OF TERMS AND ABBREVIATIONS

For purposes of clarity and uniform understanding of these materials certain terms need to be defined. These terms include:

- Arc refers to the pattern that the cane tip makes when touch technique is being used.
- Arm's-reach distance refers to the distance at which the individual could touch an object directly ahead by fully extending one arm (without the cane).
- Clue refers to an aspect of the environment which can be perceived and interpreted meaningfully.
- Cue refers to an aspect of the environment which is perceived and responded to without necessitating conscious interpretation.
- Deviant Peripatetic Behavior refers to deliberate or accidental pursuit of a line of travel which is conspicuously different from the line of travel which a sighted traveler would use to reach the same objective (e.g., veering from ISL to OSL in order to confirm landmarks; not veering to avoid an in-path obstacle; etc.)
- Familiarization refers to the process of learning the location, spatial relationship and nature of the stable elements of a given environment.
- Landmark refers to a distinguishing and readily detectable feature of the environment which serves as a reference point.
- Matching refers to the act of selecting a specific ETA for a specific student on the basis of that student's relative needs, capabilities, interests and limitations.
- Self-familiarization refers to the act of making oneself familiar with an object, an area, route, or task with which one was previously unfamiliar.
- Self-orientation refers to the act of orienting oneself to an unfamiliar area or route, by gathering information and developing a cognitive map.
- Shoreline refers to a lateral boundary or border of a travel path which is distinct from the travel path especially in its surface or structure (see Trailing).
- Trailing refers to the act of maintaining continual sonic, manual, or cane contact with a surface for the purpose of determining one's position in space, locating a specific environmental element or establishing a parallel line of travel (see Shoreline).

For purposes of brevity a number of abbreviations have been used throughout the evaluation protocol and training guidelines. These abbreviations include:

- BC = body contact, deliberately touched or accidentally bumped
- CC = cane contact, deliberate or accidental
- ETA = Electronic Travel Aid
- IM = instructional manuals as supplied by manufacturers
- ISL = inside shoreline, the shoreline farthest from the parallel street (e.g., store fronts)
- LC = The Laser Cane
- MOWAT = The Mowat Sensor
- NOD = The Nottingham Obstacle Detector
- OSL = outside shoreline, the shoreline nearest to the parallel street (e.g., parallel curb)
- PS = The Pathsounder
- SG = The Sonicguide
- T = Trainee
- TG = Training Guidelines as developed for the ESSETS approach
- > < = an indication that previous instructions given in the text of an evaluation exercise should be repeated for a new activity

Note: At a number of points in these materials letters (A) and numbers (01) appear in parentheses. These are intended to serve as codes for later data entry into computer form.

TRAINEE PROFILE SHEET

(A)

ID Code # ____________________ (01)

Optional
Name: ____ (02)
Address: ____ (03)
____ (04)
Phone #: ____ (05)

Training center: ____ (06)

Instructor: ____ (07)

STOP HERE IF YOU HAVE ALREADY COMPLETED A FULL PROFILE SHEET FOR SELECTION/MATCHING

Sex: M____ F____ (08)

Age: ______ (09)

Age at onset of blindness: ______ (10)

Lives alone: Yes____ No____ (11)

Lives with family: Yes___ No___ (12)

Lives with sighted persons: Yes___ No___ (13)

Lives in special facility (e.g., dorm, agency residence):

Yes___ No___ (14)

Cause of blindness (e.g., R.L.F., glaucoma, etc.):

____ (15)

Present visual acuity: (right eye) ____________ (left eye) ____________ (16)

Visual field: ____ (17)

Additional handicaps (check all applicable):

Deaf ___ (left ear ___ right ear ___) (18)

Partial hearing loss ___ (db left ear ___ db right ear ___) (19)

Use of limbs (e.g. paralysis, malformation, etc.): (20)

status, right arm ______________________________

status, left arm ______________________________

status, right leg ______________________________

status, left leg ______________________________

wheelchair-bound _____

palsied _____

Other neurological conditions ____ (21)

(Specify ____)

Muscular condition (e.g., hypertetanus, atrophy) ____ (22)

(Specify ____)

Other health condition ____ (23)

(Specify ____)

Emotionally disturbed ____ (24)

Retarded ____ (25)

Experientially deprived ____ (26)

Other handicap ____ (27)

(Specify ____)

Scope of present travel skills:

Uses long cane ____ (28)

Uses dog guide ____ (29)

Uses ETA ____ (Specify ____) (30)

Uses other travel aid ____ (Specify ______________________________) (31)

Travels unescorted at home: Yes____ No ____ (32)

Travels unescorted within school: Yes____ No ____ (33)

Travels unescorted home-to-school: Yes____ No____ (34)

Travels unescorted in neighborhood: Yes____ No____ (35)

Travels unescorted to recreation (other) activities:

Yes____ No____ (36)

Travels unescorted at work: Yes____ No____ (37)

Travels unescorted home-to-work: Yes____ No____ (38)

Travels unescorted when shopping: Yes____ No____ (39)

Travels unescorted to non-routine destinations:

Yes____ No____ (40)

Travels unescorted to unfamiliar areas: Yes____ No_____ (41)

LEVEL 1
PERFORMANCE EXERCISES

Structured Settings

o o o

Controlled Travel

INTRODUCTION

The six Level I exercises are selected to give an indication of trainee performance before and after he or she has received initial formal training in the use of an ETA. (It is understood that a certain amount of familiarization will have taken place during the previous matching procedures.)

Initial training involves the use of purposeful structuring of environmental elements in order to emphasize certain fundamental learning experiences. It is assumed that this structuring process includes a modest amount of trainee travel in controlled situations.

It is recognized that these criterion exercises only represent a small portion of the assessments that could logically occur at this point in training. The number of exercises has been held to a minimum consistent with the need to maintain a favorable ratio between training time and testing time. Nevertheless, it is believed that the selection of exercises does provide a useful and balanced perspective on student progress.

EXERCISE 1 : USE OF LANDMARKS
ABILITY TO CONTROL/CORRECT VEER

LEVEL 1

Setting:

Indoor or outdoor. A large, quiet, obstacle-free area (e.g., gym, unused playground).

Conditions:

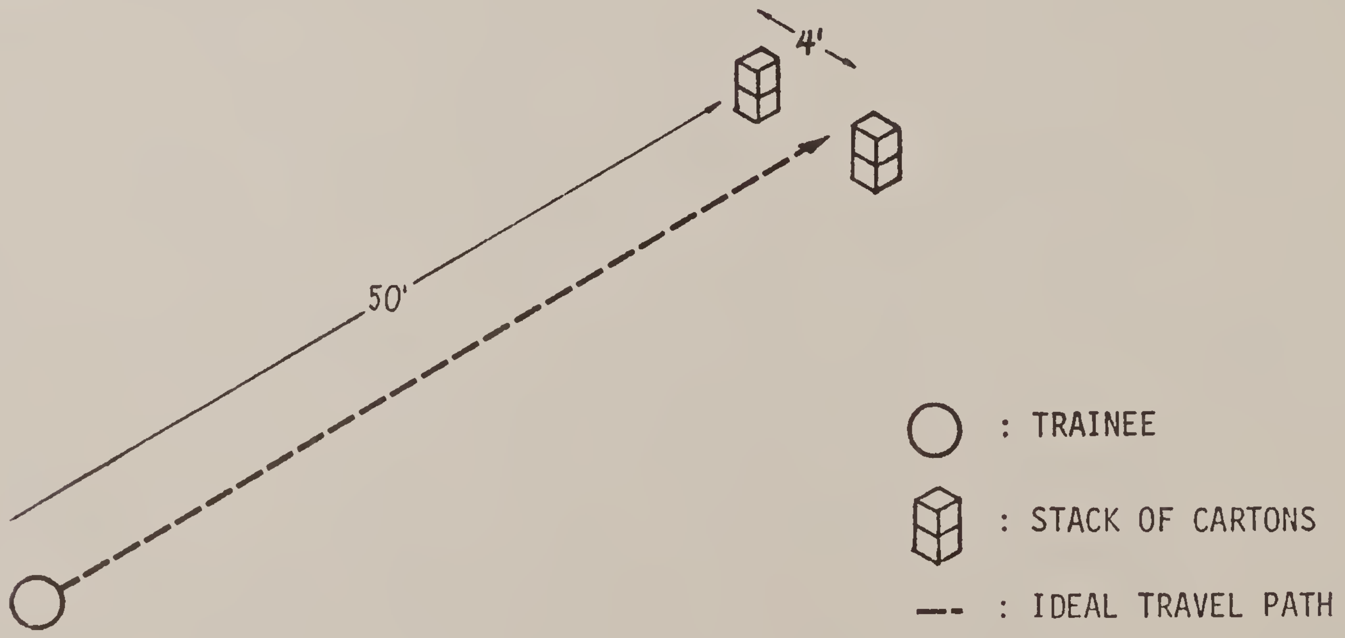
The trainee will walk forward, attempting to walk between two objects. Should he make contact with one of the objects, he will attempt to correct his error so that he may still walk between them. The objects will be two stacks of cartons placed about 50' ahead of trainee and about 4' apart from each other, one on either side of trainee's projected line of travel.

Purpose:

1) Test trainee's ability to maintain a straight line of travel for 50' without continuous, lateral, direction indicators.

2) Test trainee's ability to detect and correct a veer which moves him out of line with his destination.

Diagram :



Test Location:

DATA RECORDING

(L1)

Pre-Test (A01)

Date ____________

Specify aid used ____________

Post-Test (A02)

Date ____________

Specify aid used ____________

Re-Test (A03)

Date ____________

Specify aid used ____________

Equipment Needs

	2
	1

Notes/Remarks: ____________

(A04)

Examiner's Instructions:

Position trainee so that he is facing straight towards the opening between the 2 objects 50' ahead of him. SAY: "There are 2 objects about 50' ahead of you, one to the right of your travel path, and one to the left of it. You are now facing straight towards the opening between those 2 objects. I'd like you to walk straight ahead and try to walk through the space between those 2 objects. Try not to make cane-contact with either object. If you feel you are veering, try to correct your veer. If you do veer and make cane-contact with an object instead of finding the space between them, try to correct at that point, and walk between them anyway. Are the instructions clear? Please begin."

(SCORE ITEMS A05-A06 AS TRAINEE EXECUTES EXERCISE.)

Criteria	Pre	Post	Re
A05 Trainee either does not veer, or corrects veer to pass between objects.			
A06 Trainee passes between objects without making contact with either object.			

EXERCISE 2

LEVEL 1

- USE OF AMBIENT SOUND
- ABILITY TO CONTROL/CORRECT VEER
- USE OF LANDMARKS

Setting:

Parts A & B: Large, obstacle-free, quiet room.

Conditions:

Part A: A stack of cartons will be 30' ahead of and 5' to the left of the trainee. The examiner will tap the carton top for the silent count of five, and then the trainee will walk to the carton and make body contact with it.

Part B: A stack of cartons will be placed 30' ahead and 2' to the left of the trainee. A 2nd stack of cartons will be placed 30' ahead of the trainee and 2' to the left of the 1st carton. The examiner will tap the top of the 2nd stack of cartons for the silent count of five. The trainee will try to walk to the tapped object and make body contact with it.

Purpose:

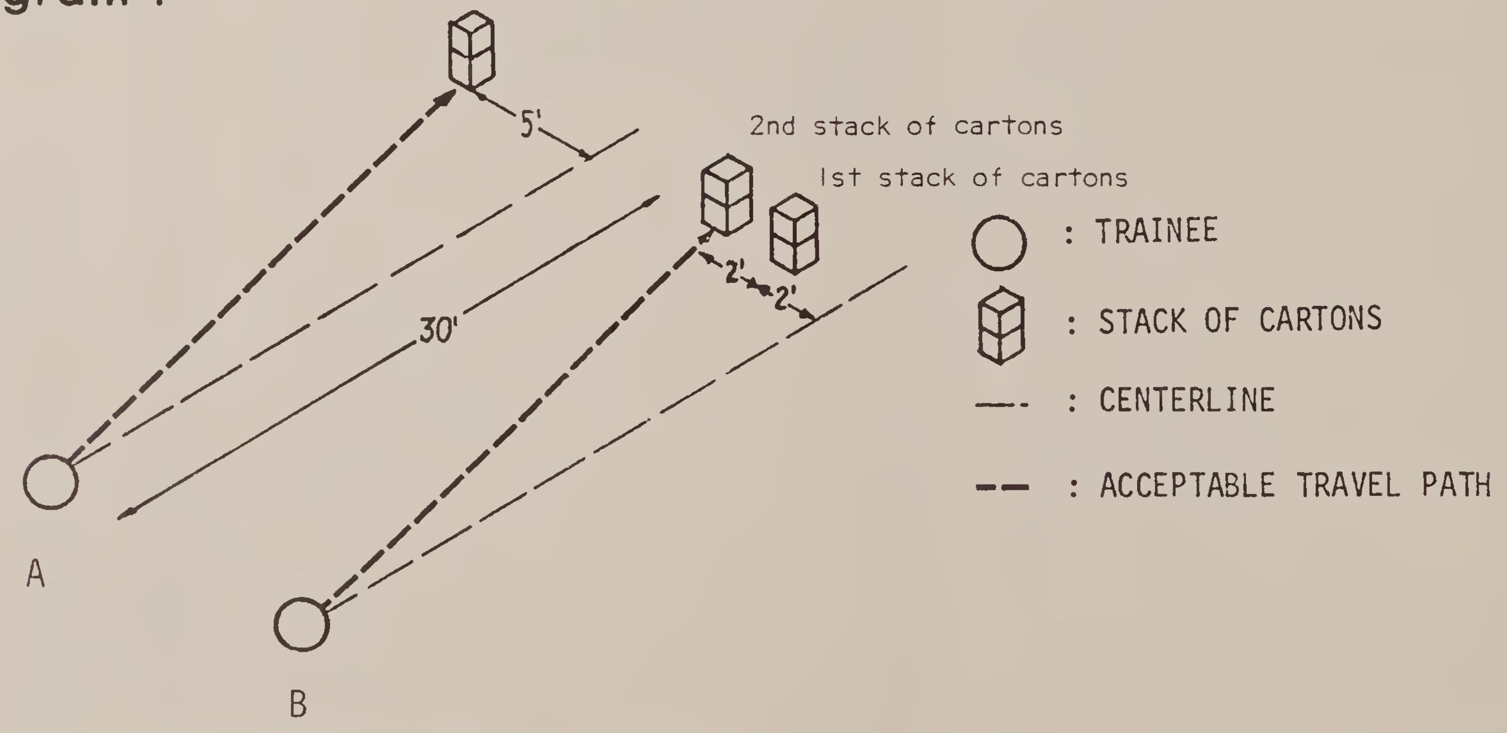
Part A

1) Test trainee's ability to project a line to his objective, travel to it and make physical contact with it, after having received a brief auditory cue indicating its location in space.

Part B

1) Test trainee's ability to make fine discriminations on the location of his objective on the basis of a brief auditory cue.
2) Test trainee's confidence in the line he initially projects to his objective on the basis of a brief auditory cue.

Diagram :



Test Location:

DATA RECORDING

(L1)

Pre-Test(B01)
Date__________
Specify aid used
____

Post-Test(B02)
Date__________
Specify aid used
____

Re-Test(B03)
Date__________
Specify aid used
____

Equipment Needs

⊥	
📦📦	2
📦	
⏱	
🪑	
➰	1
🧍	

Notes/Remarks:______________________________
____
____
____(B04)

Examiner's Instructions:

Part A: Preferably, set up carton before trainee enters the room.

>Guide trainee to starting position. SAY: "There is an object in this room, and in a moment you will hear me tapping on it. While I'm tapping, position yourself so that you think you are facing the tapped object. When I have clearly finished tapping, I'd like you to walk over to the object I tapped on and make body contact with it. Are the instructions clear? Let's begin."<

Examiner should approach carton as quietly as possible. (SCORE ITEMS B05-B06 AS TRAINEE EXECUTES EXERCISE.)

Part B: Set up 2 stacks of cartons as specified in "Conditions" section for this exercise. Repeat instructions for Part A, occurring between ><. (SCORE ITEMS B07-B08 AS TRAINEE EXECUTES EXERCISE.)

NOTE: Examiner will tap the carton to the silent count of five. (Be careful not to produce too loud a sound in a large empty room where it may result in confusing echoes.)

Criteria	Pre	Post	Re
B05 Trainee accurately turns to face tapped object.			
B06 Trainee makes physical contact with tapped object.			
B07 Trainee accurately turns to face tapped object.			
B08 Trainee makes physical contact with tapped object only (not with other stack of cartons).			

EXERCISE 3

LEVEL 1

- AVOIDANCE OF OBSTACLES
- ABILITY TO TRAVEL WITH INCREASED EFFICIENCY AND SAFETY

Setting:

Outdoor. An empty sidewalk about 25' long with well-defined shorelines (e.g., grass lines, curbs) but no walls, or other vertical shorelines.

Conditions:

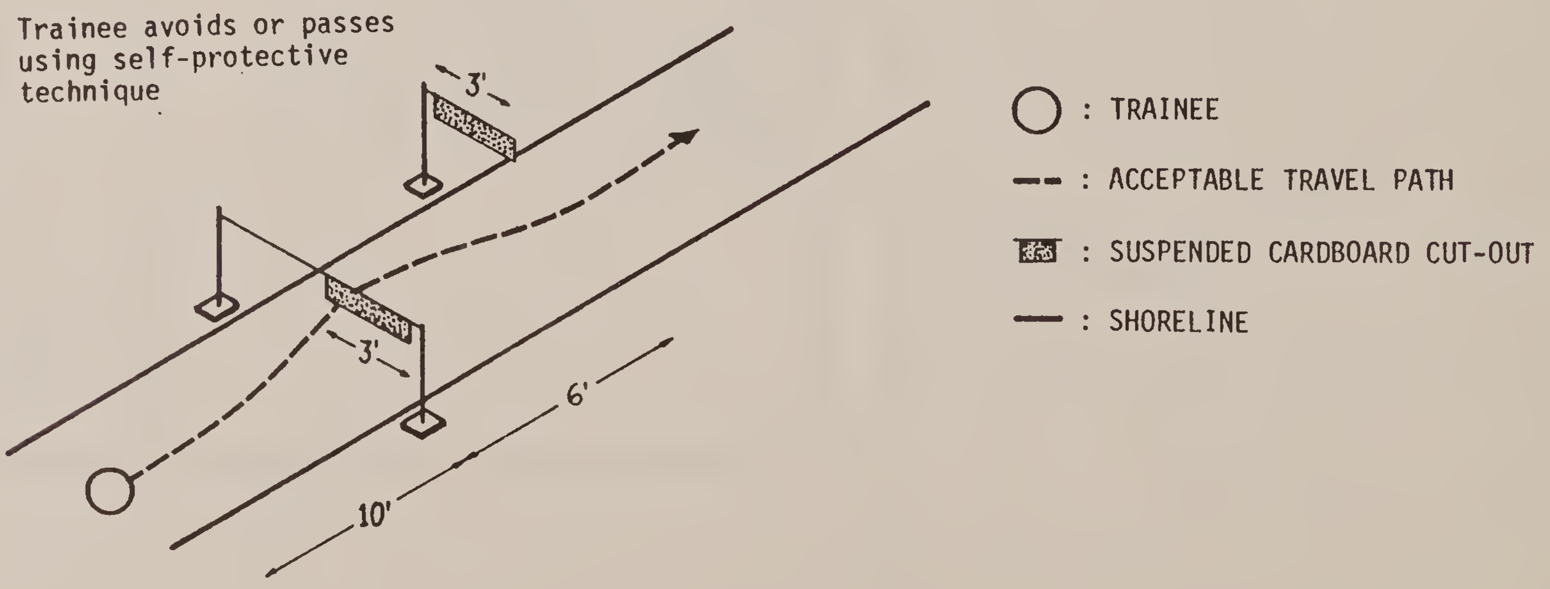
Trainee will walk along sidewalk. At 10' there will be an overhang (cardboard cut-out suspended by clothespins on twine from 2 poles, one on either side of travel path) above the travel path; at 16' there will be a 2nd overhang in the travel path. (See diagram.) Both overhangs will be low enough to make contact with trainee's head. The trainee will try to either avoid overhangs or anticipate them by employing appropriate modified self-protective technique. Trainee will try not to enter shoreline area.

Purpose:

1) Test trainee's ability to avoid potentially harmful contact with overhangs.

2) Test trainee's ability to avoid obstacles on pathway without leaving pathway.

Diagram :


Trainee avoids or passes using self-protective technique
3'
3'
6'
10'
○ : TRAINEE
-- : ACCEPTABLE TRAVEL PATH
▨ : SUSPENDED CARDBOARD CUT-OUT
— : SHORELINE

Test Location:

DATA RECORDING

(L1)

Pre-Test (C01)
Date____________
Specify aid used
____

Post-Test (C02)
Date____________
Specify aid used
____

Re-Test (C03)
Date____________
Specify aid used
____

Equipment Needs

⊥	3
⬡	
⬡	
⏱	
🪑	
◎	1
🧍	

1 adjustable overhang pole, 6 clothes pins, twine, two 1'x3' cardboard cut-outs

Notes/Remarks: ________________________
____
____
________________________ (C04)

Examiner's Instructions:

After setting up equipment, guide trainee to starting position. SAY: "I'd like you to walk straight ahead. Be on the alert for any obstacles, including overhangs, so that you can pass them in an appropriate manner. Try to pass any obstacles without stepping off the sidewalk and onto the shorelines. I will tell you when the exercise is over. Are the instructions clear? Please begin."

(SCORE ITEMS C05-C07 AS TRAINEE EXECUTES EXERCISE.)

Criteria	Pre	Post	Re
C05 Trainee detects and avoids 1st overhang, or passes it using appropriate self-protective techniqe.			
C06 Trainee detects and avoids 2nd overhang, or passes it using appropriate self-protective technique.			
C07 Trainee stays out of shorelines.			

EXERCISE 4

LEVEL 1

- AVOIDANCE OF OBSTACLES
- INCREASED CONTROL IN INTERACTION WITH SIGHTED PUBLIC
- ABILITY TO ESTABLISH AND MAINTAIN ORIENTATION

Setting:

Parts A & B: Indoor. Large, obstacle-free room.

Conditions:

Part A: There will be 5 chairs placed in a straight row, all facing the same direction, and not near any wall. A person will be seated in the 3rd chair from the end of the row. The trainee will approach the chairs, from about 20' away, attempting to detect them and their lateral peripheries.

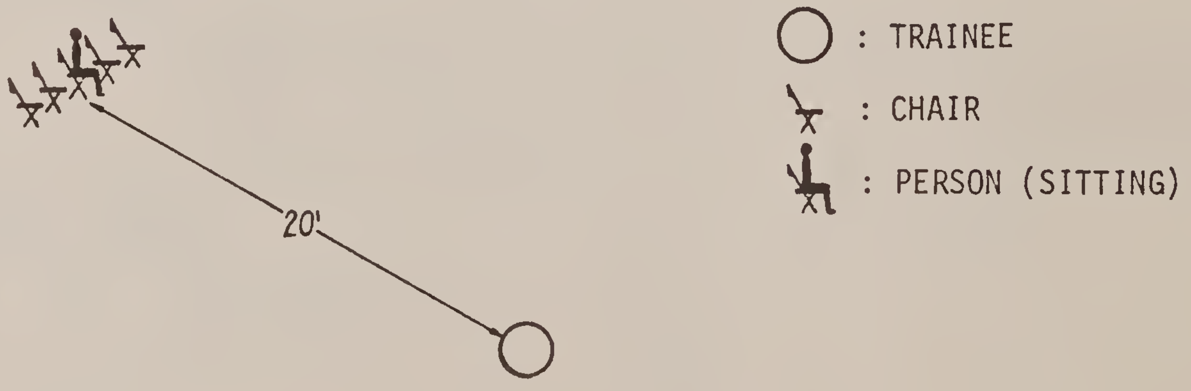
Part B: The trainee will attempt to locate the seated person without making cane or body contact with the chairs or the person.

Purpose:

1) Test trainee's ability to locate the periphery of an object in his path when it is beyond cane reach.

2) Test trainee's ability to discriminate between chairs which are occupied and chairs which are unoccupied without making cane or body contact with chairs' occupants.

Diagram :



Test Location:

DATA RECORDING

(L1)

Pre-Test (D01)
Date ____________
Specify aid used
____

Post-Test (D02)
Date ____________
Specify aid used
____

Re-Test (D03)
Date ____________
Specify aid used
____

Equipment Needs

	5*
	1

*armless chairs

Notes/Remarks: ____
____
____
____ (D04)

Examiner's Instructions:

Part A: Introduce trainee to participant. Guide trainee to starting position about 20' from chairs, facing chairs. SAY: "There's a row of chairs ahead of you. They're facing you in a row that crosses your path. Please walk towards them until you detect them. When you're sure you detect them, stop walking."

After trainee detects chairs, with or without C.C./B.C., SAY: "Please point to where the chairs are located. (Trainee indicates location.) From where you stand, is there any way you could locate the ends of this row of chairs?" If trainee says "yes," ask him to point to where the row ends on the right, then on the left. If he says "no," write in "no" for Item D06. (SCORE ITEMS D05-D06)

Part B: SAY: "There's someone sitting in one of the chairs. Please try to determine where he is sitting without making cane or body contact with him. If you think you've located him stop and point to where you think he is sitting. Are the instructions clear? Please begin."

After trainee locates person, with or without C.C./B.C., SAY: "Please take a seat next to the person." (SCORE ITEMS D07-D08)

Criteria	Pre	Post	Re
D05 Trainee detects chairs without C.C. or B.C.			
D06 Trainee correctly indicates right and left ends of row without C.C. or B.C.			
D07 Trainee locates seated person without C.C. or B.C. with person.			
D08 Trainee seats self next to person without bumping into person.			

EXERCISE 5

LEVEL 1

- USE OF LANDMARKS
- INTERACTION WITH SHORELINE
- ABILITY TO ESTABLISH AND MAINTAIN ORIENTATION

Setting:

Indoor or outdoor. A large, quiet, obstacle-free area.

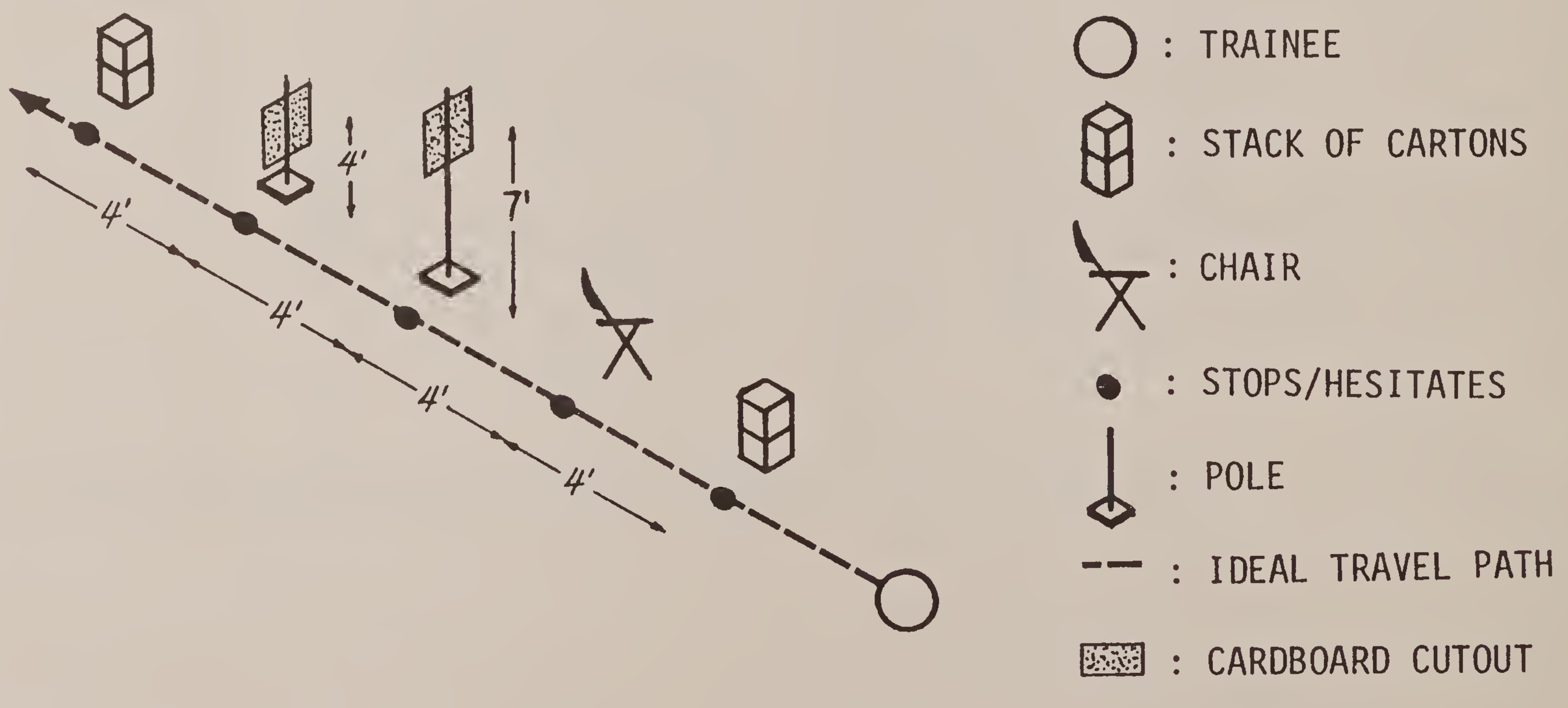
Conditions:

There will be a row of 5 objects placed 4' apart. The 3rd object will be a 7' high pole with a 1'x3 cardboard cutout attached vertically. The 4th object will be a 4' high pole with a 1'x3' cardboard cutout attached vertically. The other objects will be stacks of cartons and a chair. The trainee will try to trail this row noticing which object is the tallest. He will try to stop immediately after passing the 5th object. He will indicate which of the objects passed he thinks was tallest. Whether or not he indicates correctly, he will reverse his route, trying to stop beside the tallest object.

Purpose:

1) Test trainee's ability to trail a shoreline of objects with 4' gaps between them.
2) Test trainee's ability to distinguish an object of significantly greater height from others in the shoreline.
3) Test trainee's ability to remember sequence in which specific object occurs.
4) Test trainee's ability to detect separate objects in shoreline as such, and count them.
5) Test trainee's ability to recognize a specific object by recognizing its identifying characteristic on a reverse route past the same shoreline.

Diagram :



Test Location:

DATA RECORDING

(L1)

Pre-Test(E01)
Date ____________
Specify aid used
____

Post-Test(E02)
Date ____________
Specify aid used
____

Re-Test(E03)
Date ____________
Specify aid used
____

Equipment Needs

⊥	2*
⬡	2
⬡	
⏱	1
🪑	1
⊙	1
🧍	

*One 7' pole & one 4' pole
2 cardboard cutouts

Notes/Remarks: ____
____
____
____ (E04)

Examiner's Instructions:

Help trainee position himself at beginning of row. Tap 1st object to indicate its location. Walk to opposite end of row, face trainee, SAY: "When you are facing me, you are facing straight along the line of travel you need to parallel a row of objects on your right. There are 5 objects in a row here, and in a moment I'm going to ask you to trail this row of objects. Not all of the objects are identical, and as you trail the row, I'd like you to notice which is the tallest--the 1st or the 2nd or...etc. I'll ask you about it when we're done. Touch the objects only if you must do so to trail the row or to decide which is tallest. I'd like you to stop immediately after passing the 5th object. Are the instructions clear? Please begin." (SCORE ITEMS E05-E08 AS TRAINEE EXECUTES EXERCISE)

SAY: "Which object was the tallest? The 1st, 2nd, (etc.)?" (SCORE ITEM E09)

SAY: "Now turn around, reverse your route, but this time only go as far as the tallest object. When you are beside the tallest object, stop walking. Are the instructions clear? Please begin." (SCORE ITEM E10)

Criteria	Pre	Post	Re
E05 Trainee trails row of objects without losing initial direction of travel.			
E06 Trainee studies objects to extent necessary to form judgment without touching them.			
E07 Trainee stops immediately after passing 5th object.			
E08 TOTAL TIME ELAPSED SINCE TRAINEE BEGAN TRAILING			
E09 Trainee says, 3rd object.			
E10 Trainee stops beside tallest object.			

EXERCISE 6 :

LEVEL 1

- USE OF/INTERACTION WITH SHORELINE
- AVOIDANCE OF OBSTACLES
- ABILITY TO TRAVEL WITH INCREASED EFFICIENCY AND SAFETY

Setting:

Indoor. Hallway 6'-8' wide, about 50' long, with 3 doors at least 2 of which open into hall.

Conditions:

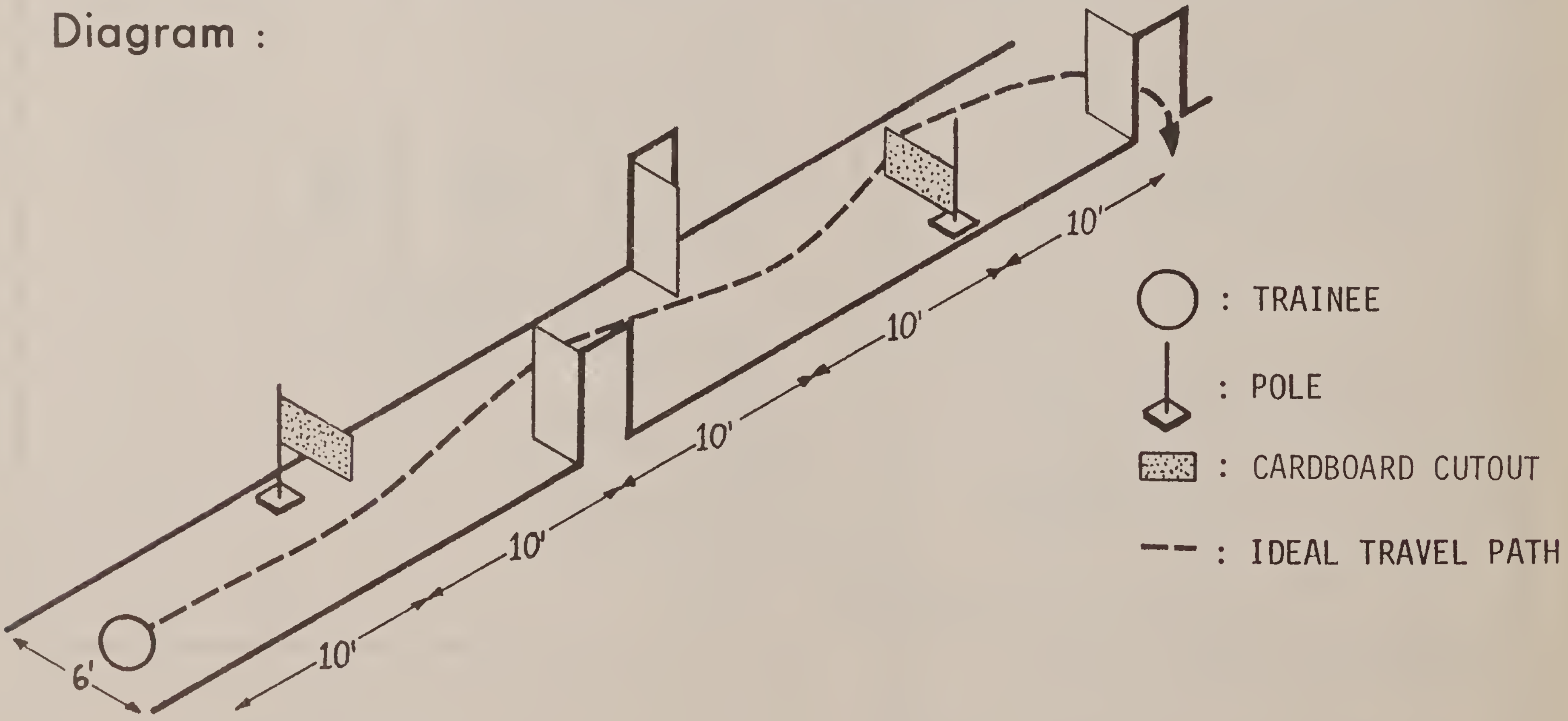
Trainee will walk along hallway which has 2 obstacles jutting from poles placed next to the wall, 1 obstacle at head height, the other at waist height, and 2 doors opened into the hallway perpendicular to the wall. The 3rd open door will be at the end of the route, laterally placed, and a few feet from the last obstacle.

The trainee will walk through the hall, trying to avoid cane or body contact with obstacles and walls, then attempt to detect and go through the 3rd open door at the end of the route.

Purpose:

1) Test trainee's ability to avoid overhangs which jut from the shoreline.
2) Test trainee's ability to avoid obstacles which jut from the shoreline, beginning at ground level.
3) Test trainee's ability to avoid cane contact with an irregular shoreline beside which he is traveling.
4) Test trainee's ability to detect and use openings in the shoreline.
5) Estimate time needed by trainee to travel an obstacle course for about 50', and locate his destination.

Diagram :



Test Location:

____

____

DATA RECORDING

(L1)

Pre-Test(F01)
Date____________
Specify aid used
____

Post-Test(F02)
Date____________
Specify aid used
____

Re-Test(F03)
Date____________
Specify aid used
____

Equipment Needs

	2
	1
	1

Two 1' x 3' card-board cutouts

Notes/Remarks:________________________________
____
____
________________________________ (F04)

Examiner's Instructions:

Do not select 2 doors which are directly across the hall from each other. As nearly as possible in consideration of the 2 opened doors, try to space the obstacles (doors & cardboard cutouts) about 10' distant from each other. (see diagram.) Affix cardboard cutouts to the poles or walls with tape or tacks. They should jut about 3' into the hallway.

Guide trainee to starting position. SAY; "I'd like you to walk along this hallway. I'm going to time you so we can compare your time score today with your time scores later. There are several obstacles along the route. Try to avoid making cane or body contact with any of them, or with the walls. As soon as you have passed the last obstacle, I will say 'exit,' and I want you to locate the open door which will be either on your left or your right, and go through it. Try to locate that opening without making cane or body contact with the wall. Are the instructions clear? Please begin."

As soon as trainee has passed the last obstacle, SAY: "EXIT." (SCORE ITEMS F05-F10 AS TRAINEE EXECUTES EXERCISE. SCORE ITEM F11 AFTER TRAINEE HAS COMPLETED EXERCISE.)

Criteria	Pre	Post	Re
F05 Trainee avoids head-height overhang.			
F06 Trainee avoids 1st perpendicular door without C.C. or B.C.			
F07 Trainee avoids 2nd perpendicular door without C.C. or B.C.			
F08 Trainee avoids waist-height obstacle or passes using self-protective technique.			
F09 Trainee detects 3rd open doorway without C.C. or B.C., and exits through it.			
F10 Trainee avoids C.C. with wall.			
F11 TOTAL TIME ELAPSED SINCE TRAINEE BEGAN ROUTE			

SUMMARY SCORE SHEET

PROCEDURES

The following two pages are to help you assess the trainee's performance in Level I.

The first summary sheet is for entries on "Yes-No" items. This form allows the instructor and the trainee to see how well the student has performed on each of eleven instructional outcomes.

In Level I, for example, four items relate to the Ability to Control/ Correct Veer. They appear in Performance Exercises I and 2. Using the space provided to the right side of the form, the instructor should enter the number of "Yes" scores and the number of "No" scores on the pretest for these items. After posttesting is completed for Level I the same procedure is followed and the new number of "Yes" scores and "No" scores is entered. The extent of progress shown by the trainee on each instructional outcome is represented by the increase in "Yes" scores between the pretest and posttest.

The second summary sheet is for numerical items. This form allows the instructor to summarize improvements of three types: contact errors, elapsed time, and environmental detections. Each numerical item in Level I is indicated in the lefthand column and space is provided for the instructor to transfer the numerical pretest and posttest scores.

In Level I, for example, both items relate to elapsed time. After entering the pretest and posttest data, the instructor should check whether improvement was shown, and then complete the bottom of the form.

LEVEL 1--PERFORMANCE EXERCISES

SUMMARY SHEET--YES/NO ENTRIES

Instructional Outcomes	Performance Exercises						Total Pretest	Total Posttest
	1	2	3	4	5	6		
ABILITY TO CONTROL/ CORRECT VEER	A05 A06	B06 B08					yes____ no ____	yes____ no ____
ABILITY TO ESTABLISH AND MAINTAIN ORIENTATION				D05 D06	E06 E09		yes____ no ____	yes____ no ____
ABILITY TO TRAVEL WITH INCREASED EFFICIENCY AND SAFETY			C05 C06 C07			F05 F06 F07 F08 F09 F10	yes____ no ____	yes____ no ____
ABILITY TO TRAVEL WITH A MINIMUM OF DEVIANT PERIPATETIC BEHAVIOR					E06		yes____ no ____	yes____ no ____
ABILITY TO TRANSFER ENVIRONMENTAL ELEMENTS RECOGNITION AMONG TYPICAL ENVIRONMENTS							yes____ no ____	yes____ no ____
ABILITY TO USE PUBLIC TRANSPORTATION							yes____ no ____	yes____ no ____
AVOIDANCE OF OBSTACLES			C05 C06	D05		F05 F06 F07 F08 F10	yes____ no ____	yes____ no ____
INCREASED CONTROL IN INTERACTIONS WITH SIGHTED PUBLIC				D07 D08			yes____ no ____	yes____ no ____
USE OF AMBIENT SOUND		B05 B07					yes____ no ____	yes____ no ____
USE OF/INTERACTION WITH SHORELINE			C07		E05 E06 E09 E10	F09 F10	yes____ no ____	yes____ no ____
USE OF LANDMARKS	A05	B05 B06 B07 B08			E06 E07 E09 E10		yes____ no ____	yes____ no ____

LEVEL 1 - PERFORMANCE EXERCISES

SUMMARY SHEET - NUMERICAL ENTRIES

Item Number	Contact Errors		Check if Improvement Shown	Elapsed Time		Check if Improvement Shown	Environmental Detections		Check if Improvement Shown
	Pre	Post		Pre	Post		Pre	Post	
E08				___	___	___			
F11				___	___	___			
1. Total number of items	___			2			___		
2. Number of items attempted	___			___			___		
3. Number of items showing improvement	___			___			___		

LEVEL 2
PERFORMANCE EXERCISES

Semi-Structured Settings

o o o

Intermediate Travel

INTRODUCTION

The seven exercises which are contained in Level 2 are selected to give an indication of student performance before and after he or she has received training in intermediate travel situations, such as residential travel or school and campus travel. It is assumed that some structuring of the setting is attempted to preserve evaluation standards. However, there will also be some variability due to differences in the physical settings and events that take place.

It is recognized that these criterion exercises only represent a small proportion of the assessments that could logically occur at this point in training. The number of exercises has been held to a minimum consistent with the need to maintain a favorable ratio between training time and testing time. Nevertheless, it is believed that the selection of exercises does provide a useful and balanced perspective on student progress.

EXERCISE 1

LEVEL 2

- USE OF/INTERACTION WITH SHORELINE
- ABILITY TO TRAVEL WITH A MINIMUM OF DEVIANT PERIPATETIC BEHAVIOR

Setting:

PART A: Indoor. Unfamiliar travel route. Obstacle-free hallway, between 6'-8' wide and about 50' long. There are to be 5 open doorways along the route. They should not open to the outdoors nor to rooms providing ambient sound cues. (The openings should be located on both sides of hall, and ideally the doors themselves should open away from the hall rather than into it.

PART B: Same as PART A, but with 6 closed doors and in a hallway other than the one used for PART A.

Conditions:

PART A: Trainee will walk through hallway using whatever technique he wishes to detect open doorways. He will tell the examiner each time he detects an open door, and at the end of the exercise he will state the total number of open doors he thinks he passed.

PART B: Trainee will walk through hallway using whatever technique he wishes to detect closed doorways. He will tell the examiner each time he detects a closed door, and at the end of the exercise he will state the total number of closed doors he thinks he passed.

Purpose:

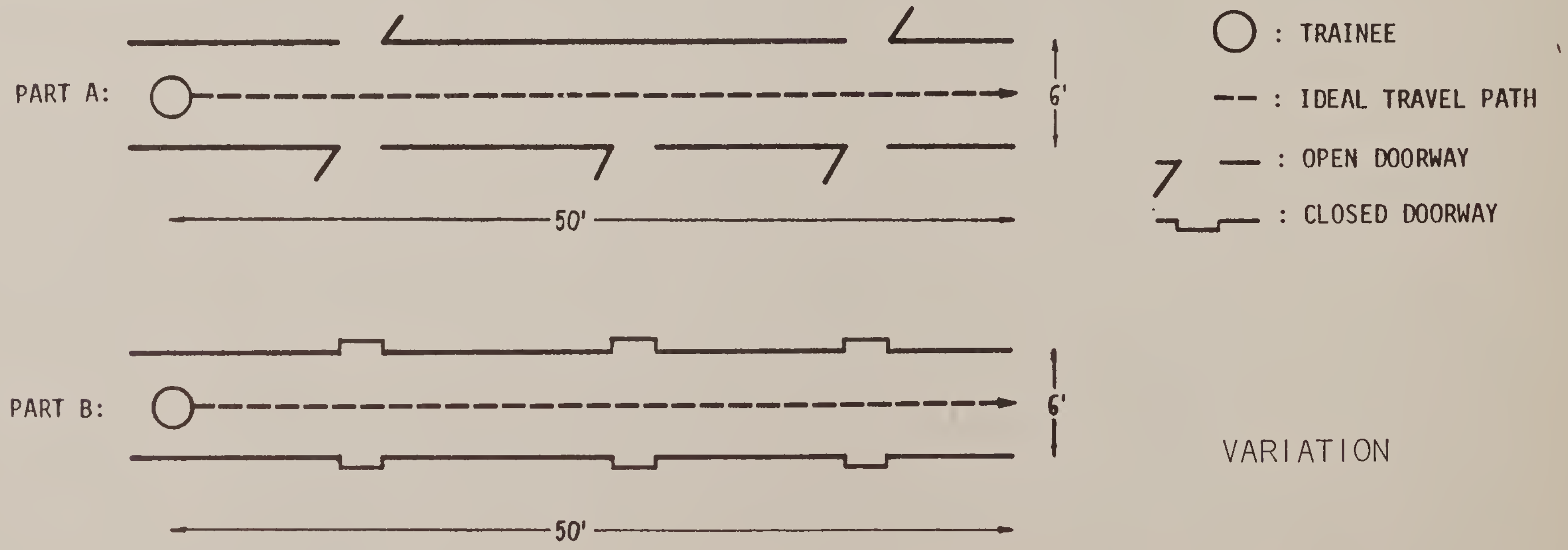
PART A:

1) Test trainee's ability to detect and locate openings in a shoreline.
2) Test trainee's ability to travel in a straight line while seeking openings in both shorelines.

PART B:

1) Test trainee's ability to detect and locate closed doors in the shoreline.
2) Test trainee's ability to travel in a straight line while seeking doors in both shorelines.

Diagram :



Test Location:

DATA RECORDING

(L2)

Pre-Test(A01)
Date______________
Specify aid used
____

Post-Test(A02)
Date______________
Specify aid used
____

Re-Test(A03)
Date______________
Specify aid used
____

Equipment Needs	

Notes/Remarks:______________________________________
____
____
____(A04)

Examiner's Instructions:

PART A: Guide trainee to starting position. SAY: "There are some open doorways on both sides of this hall. I would like you to walk along the hall and each time you think you detect an open doorway, I'd like you to stop and point to where you think it is. I'll tell you when to stop walking. Are the instructions clear? Please begin." (SCORE ITEMS A05-A06)

PART B: Guide trainee to starting position. SAY: "There are closed doors on both sides of this hall. I'd like you to walk along the hall and each time you think you detect a closed doorway, please stop and point to where you think it is. I'll tell you when to stop. Are the instructions clear? Please begin." (SCORE ITEMS A07-A08)

Criteria	Pre	Post	Re
A05 NUMBER OF OPEN DOORWAYS TRAINEE CORRECTLY DETECTS WHILE HE IS ON ROUTE			
A06 Trainee maintains essentially straight line of travel.			
A07 NUMBER OF CLOSED DOORWAYS TRAINEE CORRECTLY DETECTS WHILE HE IS ON ROUTE			
A08 Trainee maintains essentially straight line of travel.			

EXERCISE 2
LEVEL 2

- ABILITY TO TRANSFER ENVIRONMENTAL ELEMENT RECOGNITION AMONG TYPICAL ENVIRONMENTS
- ABILITY TO TRAVEL WITH INCREASED EFFICIENCY AND SAFETY

Setting:

A business setting to be selected that has offices with interior halls including a turn.

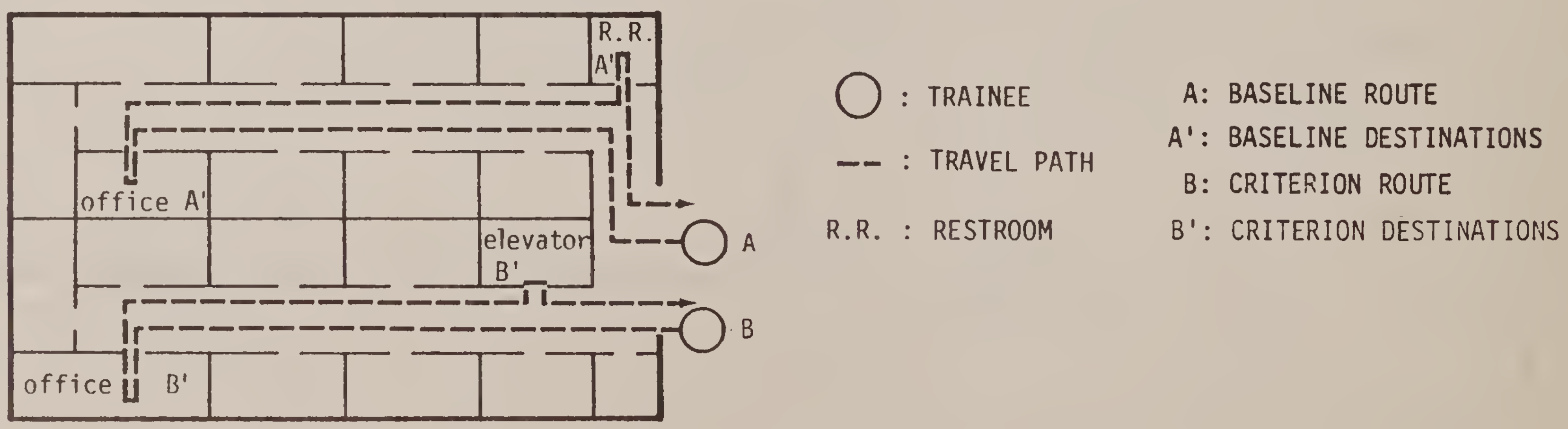
Conditions:

The trainee should have been inside similar places of business during training, but not this place of business. The trainee is to accomplish an "errand" in this setting. Route A is intended to provide a baseline assessment of performance without use of an ETA. Route B is a criterion exercise to be done following training, and using whichever ETA has been taught.

Purpose:

Test trainee's ability to negotiate an interior setting involving halls and locate specific destinations there on the basis of brief, prior verbal directions.

Diagram: VARIATION



Test Location:

DATA RECORDING

(L2)

	(PRETEST) ROUTE A	(POSTTEST) ROUTE B
Dates of Route Exercises	(B01)	(B04)
Type of ETA Used	N/A	(B05)
Type of Office Building Used	(B02)	(B06)
Route Descriptions (as given to trainee)	(B03)	(B07)

Examiner's Instructions:

SAY: "We are just outside the (general offices). It is a large building of offices, similar in layout to (name of place previously visited). I'd like you to locate the (name specific office) which is in the hall to the right of the entrance, and at the 4th door on the left. Then locate the (suggest elevators or mens/ladies restroom), which is located (specify). Try to do this without soliciting aid. Are the instructions clear? Please begin."

Criteria		ROUTE A (PRE)	ROUTE B (POST)
B08	Locates the office (unaided)		
B09	Locates restroom/elevators (unaided)		
B10	Locates exit door and exits building (unaided)		
B11	Followed route as directed		

PRETEST REMARKS (A):

(B12)

POSTTEST REMARKS (B) (Indicate whether ETA use minimized object contact and/or maximized identification of destinations, or otherwise helped.):

(B13)

EXERCISE 3
LEVEL 2

- USE OF LANDMARKS
- ABILITY TO TRAVEL WITH A MINIMUM OF DEVIANT PERIPATETIC BEHAVIOR

Setting:

Outdoor. An unfamiliar route of about 1 block, in a quiet residential area. There must be a fence, or a wall, or a hedge row, of at least trainee's waist height, but below trainee's head height, continuous for at least 4' in the inside shoreline and a down-curb of at least 6" at the end of the route.

Conditions:

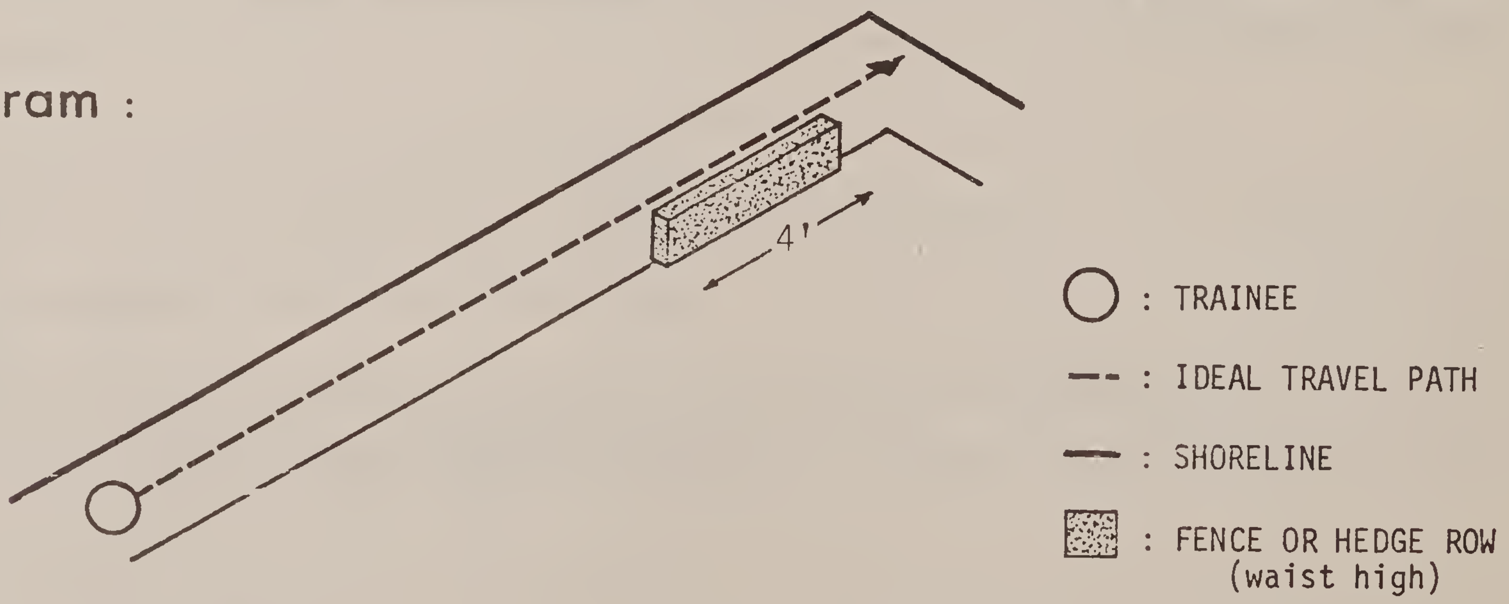
The trainee will walk about 1 block in a residential area with a minimum of pedestrian traffic. Somewhere along his route, a fence, wall, or hedge row will occur in the inside shoreline, and a down-curb will occur at the route's end.

The trainee will attempt to detect and recognize these environmental elements without making cane contact with them.

Purpose:

1) Test trainee's ability to recognize separate environmental elements associated with the travel path, without making cane-contact with those elements.
2) Test trainee's ability to detect a significant drop-off/step-down before making cane or body contact with it.

Diagram :



Test Location:

DATA RECORDING

(L2)

Pre-Test(C01)
Date________________
Specify aid used
____

Post-Test(C02)
Date________________
Specify aid used
____

Re-Test(C03)
Date________________
Specify aid used
____

Equipment Needs

Notes/Remarks:____
____
____
____(C04)

Examiner's Instructions:

Guide trainee to starting position. SAY: "I'd like you to walk along this block. Stop and tell me if you detect a (examiner indicates fence, wall or hedge row) in the inside shoreline, and stop and tell me when you detect a down-curb. Try to detect the (fence/wall/hedge row) without making cane contact with it, and try to stop just before making cane contact with the down-curb. Are the instructions clear? Please begin."

(SCORE ITEMS C05-C06 AS TRAINEE EXECUTES EXERCISE.)

Criteria	Pre	Post	Re
C05 Trainee detects and recognizes fence/wall/hedge row without making C.C. with it.			
C06 Trainee detects and recognizes down-curb before making C.C. with it.			

EXERCISE 4
LEVEL 2

- ABILITY TO USE PUBLIC TRANSPORTATION
- ABILITY TO TRAVEL WITH INCREASED EFFICIENCY AND SAFETY
- ABILITY TO TRAVEL WITH A MINIMUM OF DEVIANT PERIPATETIC BEHAVIOR

Setting:

Outdoor. An unfamiliar route of about 1 block in a quiet residential area. There must be a mailbox (large, not pole-mounted) in the outside shoreline. There must also be some poles/trees in outside shoreline, but none should exceed one-half the width of the mailbox. The last object in the outside shoreline will be a bus-stop pole (any pole similar to a bus-stop pole will do).

Conditions:

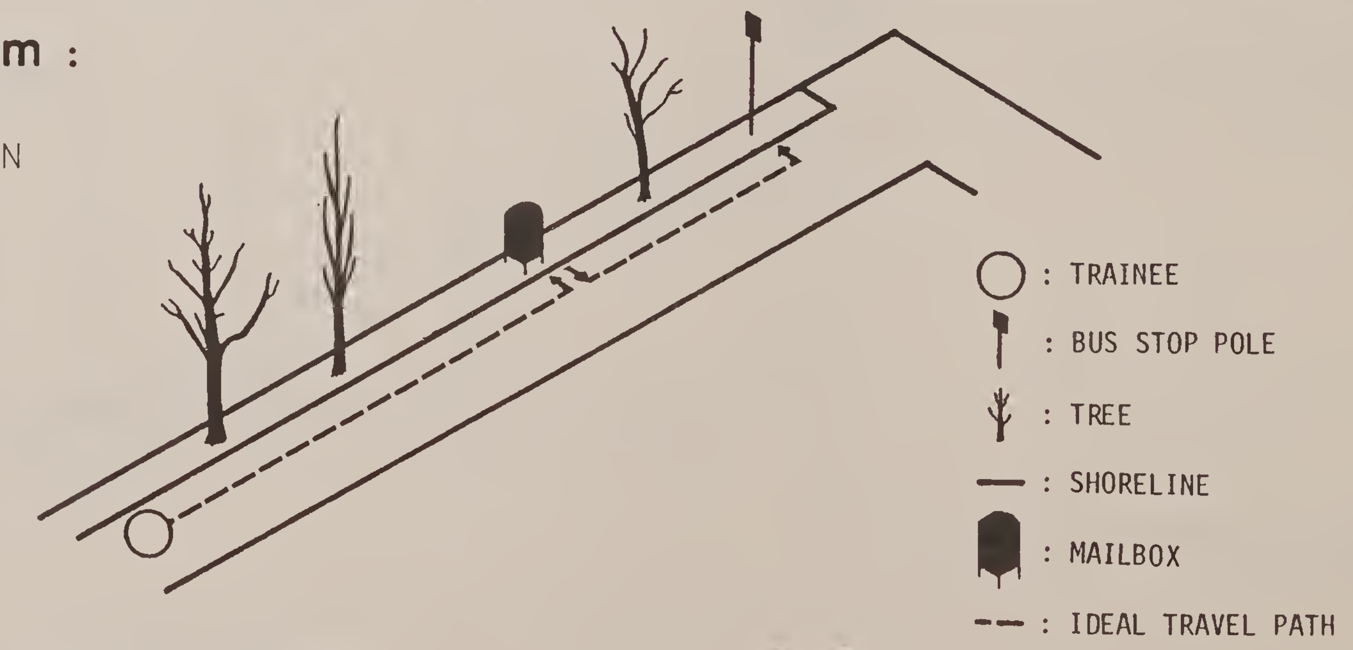
Trainee will locate both a mailbox and a bus-stop pole on the basis of minimal verbal orientation to their locations. The mailbox will be in the outside shoreline about ½ block from his starting point. The bus-stop pole will be the last object in the outside shoreline. Trainee will attempt to detect and locate mailbox prior to making cane contact with it. The trainee will then continue along, trying to locate the bus-stop pole prior to making physical contact with it. He will then attempt to walk up to the pole and grasp it.

Purpose:

1) Test trainee's ability to detect and locate a specific laterally placed object in an unfamiliar area after receiving minimal verbal orientation to object's location.
2) Test trainee's ability to detect and locate such an object prior to cane contact or body contact with it.
3) Test trainee's ability to maintain a straight line of travel while seeking such an object.
4) Estimate time needed for trainee to locate several such objects (within a 1-block area).

Diagram :

VARIATION



Test Location:

DATA RECORDING

(L2)

Pre-Test (D01)
Date____________
Specify aid used
____

Post-Test (D02)
Date____________
Specify aid used
____

Re-Test (D03)
Date____________
Specify aid used
____

Equipment Needs

⏱	1

Notes/Remarks:________________________
____
____
(D04)
____

Examiner's Instructions:

Guide trainee to starting position. SAY: "I'd like you to walk along this block. In the outside shoreline there are a few slim poles/trees. There is also a mailbox and a bus-stop pole. I'd like you to find those two things. First find the mailbox, then go up to it and put your hand on it. You may use any technique you wish except soliciting aid. If you think you detect the mailbox before making cane contact with it, please stop and tell me. Tell me where you think it is before going on to make cane contact with it. The last object in the outside shoreline is the bus-stop pole. After you've found the mailbox, please continue along the block and find the bus-stop pole. Remember that there are a few other poles/trees in the outside shoreline. Are the instructions clear? Please begin."

(SCORE ITEMS D05 - D11 AS TRAINEE EXECUTES EXERCISE. SCORE ITEM D12 AFTER TRAINEE COMPLETES EXERCISE.)

Criteria	Pre	Post	Re
D05 Trainee detects mailbox without trailing with cane.			
D06 Trainee indicates detection & location of mailbox before making C.C.			
D07 Trainee maintains an essentially straight line of travel while seeking the mailbox.			
D08 TOTAL TIME ELAPSED SINCE TRAINEE BEGAN SEEKING MAILBOX			
D09 Trainee does not mistake another object for the bus-stop pole.			
D10 Trainee locates bus-stop pole and makes B.C. with it.			
D11 Trainee maintains essentially straight line of travel while seeking pole.			
D12 TOTAL TIME ELAPSED SINCE TRAINEE BEGAN SEEKING BUS-STOP POLE			

EXERCISE 5

LEVEL 2

- INCREASED CONTROL IN INTERACTIONS WITH SIGHTED PUBLIC
- USE OF/INTERACTION WITH SHORELINE
- ABILITY TO REACH DESTINATION WITH MAXIMUM EFFICIENCY AND SAFETY

Setting:

Indoor. A hallway 6'-8' wide and about 50' long, quiet.

Conditions:

Trainee will walk along hall trying to avoid contact with moving obstacles & with wall. At about 10' a pedestrian will walk toward trainee, partially obstructing his line of travel. After trainee re-establishes a line of travel, a 2nd pedestrian will walk towards him in the same manner. Before trainee can re-establish a line of travel, a 3rd pedestrian will enter his path. After trainee resumes travel, he will reverse his route in hallway. At 10', a 4th pedestrian will cross the hall in front of trainee. After trainee has re-established his line of travel, a 5th pedestrian will walk past him from behind, deliberately entering trainee's travel path, & slowing his pace to the extent that trainee must either avoid & pass, or markedly slow his own pace to avoid running into 5th pedestrian from behind.

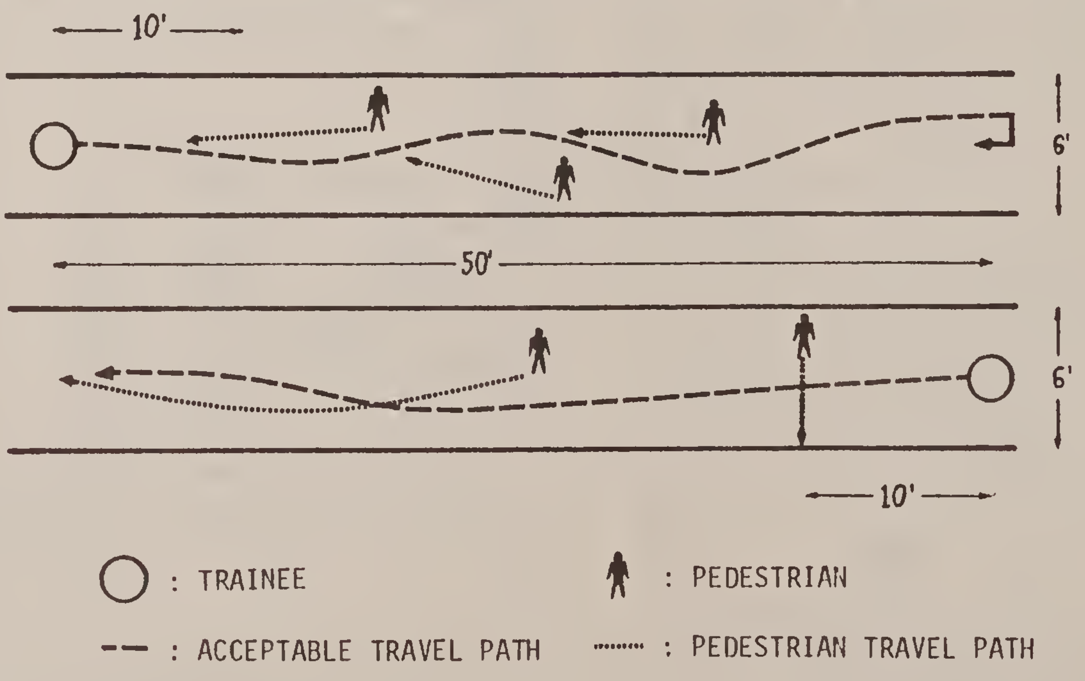
Purpose:

1) Test trainee's ability to avoid moving obstacles.

2) Test trainee's ability to control/correct veer and re-establish a line of travel.

3) Test trainee's ability to avoid contact with shoreline while avoiding moving obstacles in his path.

Diagram :



Test Location:

DATA RECORDING (L2)

Pre-Test (E01)
Date ____________
Specify aid used
____

Post-Test (E02)
Date ____________
Specify aid used
____

Re-Test (E03)
Date ____________
Specify aid used
____

Equipment Needs

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⬡	
⏱	1
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◎	
🧍	3

Notes/Remarks: ____
____
____
____ (E04)

Examiner's Instructions:

Guide trainee to starting position. SAY: "I'd like you to walk along this hallway. There will be other pedestrians in the hall, walking in various directions. I'd like you to try to avoid them without slowing your normal pace any more than necessary. Please also try to avoid making cane or body contact with the walls. Are the instructions clear? Please begin?" (SCORE ITEMS E05-E09 AS TRAINEE EXECUTES EXERCISE.)

After trainee and 3rd pedestrian have passed each other, & trainee has had ample opportunity to re-establish his line of travel, stop your watch and SAY: "Please turn around, reverse your route now, and walk foward. Continue trying to avoid pedestrians without slowing your pace more than necessary. You may pass a pedestrian if that seems advisable." (SCORE ITEMS E10-E14)

Criteria	Pre	Post	Re
E05 Trainee avoids 1st pedestrian.			
E06 Trainee re-establishes line of travel.			
E07 Trainee avoids 2nd pedestrian.			
E08 Trainee avoids 3rd pedestrian.			
E09 Trainee re-establishes line of travel.			
E10 Trainee avoids 4th pedestrian.			
E11 Trainee re-establishes line of travel.			
E12 Trainee avoids or passes 5th pedestrian.			
E13 Trainee avoids making C.C. or B.C. with wall during exercise.			
E14 TOTAL TIME ELAPSED SINCE TRAINEE BEGAN WALKING			

EXERCISE 6

LEVEL 2

- ABILITY TO USE PUBLIC TRANSPORTATION
- INCREASED CONTROL IN INTERACTIONS WITH SIGHTED PUBLIC
- ABILITY TO ESTABLISH AND MAINTAIN ORIENTATION

Setting:

Indoor or outdoor. Any office, ticket window, etc., having a distinct and orderly line of people in front of it, and a minimum of other pedestrian traffic.

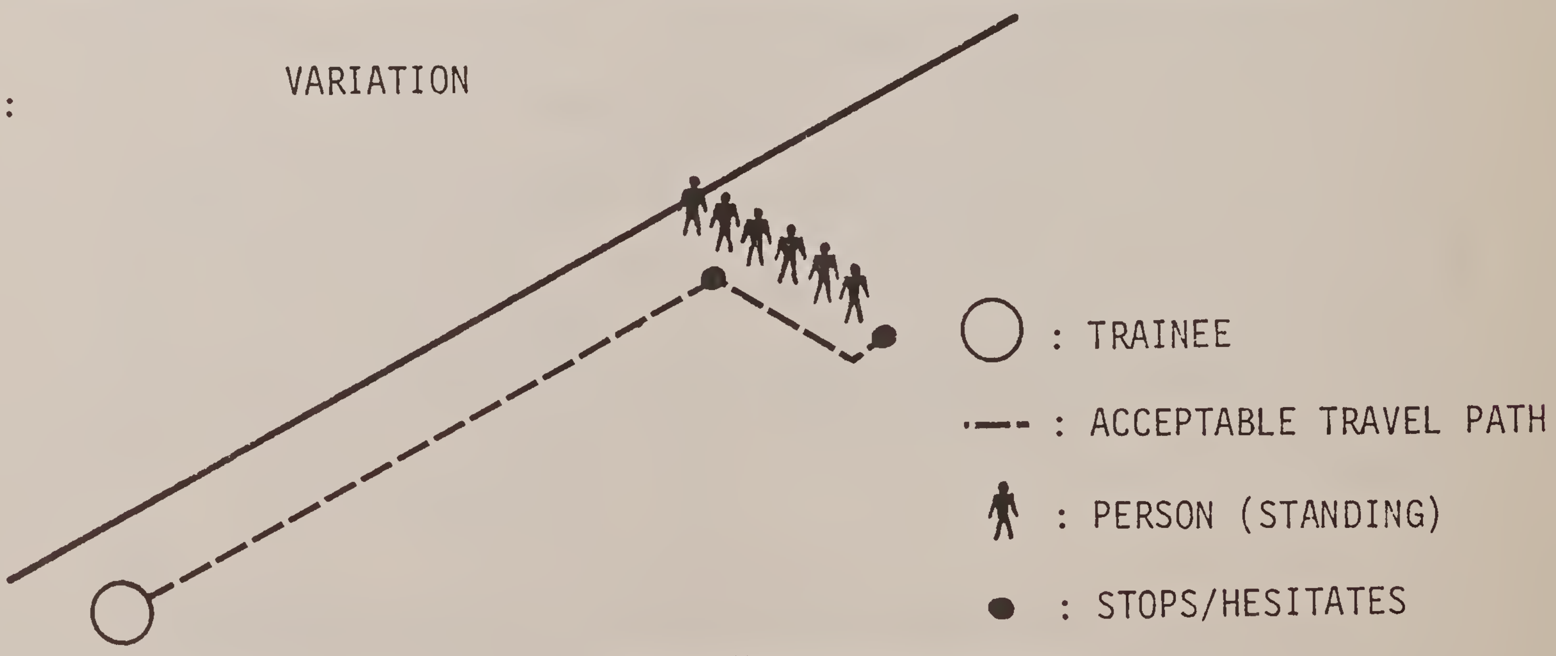
Conditions:

After receiving a brief verbal orientation to relevant aspects of the area and on the location of the line, the trainee will try to locate the line and take his place at the end of the line, attempting not to make cane or body contact with other people.

Purpose:

1) Test trainee's ability to detect a·line of people, locate the end of that line, and take his place in line, avoiding cane or body contact with others in the line.

Diagram :



Test Location:

DATA RECORDING

(L2)

Pre-Test(F01)
Date ____________
Specify aid used
____

Post-Test(F02)
Date ____________
Specify aid used
____

Re-Test(F03)
Date ____________
Specify aid used
____

Equipment Needs

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🚶	approx. 6

Notes/Remarks: ____________
____
____
____________ (F04)

Examiner's Instructions:

Guide the trainee to a position about 50' away from the line. (If the line is in a building, this may be outside of the room or building in which the line occurs.)

Give trainee a brief verbal orientation to any highly relevant environemtnal elements; include information on whether the ticket window/counter/etc. where the line begins will be to the trainee's right, left, or in front of him as he approaches from his starting position. (Do not include information on the location of the end of the line. Do not select an area where there are several lines close together.) After completing the verbal orientation, SAY: "Now I'd like you to proceed to locate the line and take your place at the end of the line. Try to avoid cane or body contact with people in line. Are the instructions clear? Please begin." (SCORE ITEMS F05-F07 AS EXECUTED)

If people in line assist trainee this invalidates exercise. Please repeat it in a new location. (Informing those waiting in line of what is taking place, just before beginning exercise, is recommended as a way to avoid the problem.)

Criteria	Pre	Post	Re
F05 Trainee locates line without making C.C. or B.C. with people in line.			
F06 Trainee locates the end of the line without C.C. or B.C. with people in line.			
F07 Trainee takes his place at the end of the line.			

EXERCISE 7

LEVEL 2

- ABILITY TO TRAVEL WITH INCREASED EFFICIENCY AND SAFETY
- ABILITY TO CONTROL/CORRECT VEER

Setting:

Outdoor. A street crossing which presents either an offset intersection or a "T" intersection. (See Diagram.)

Conditions:

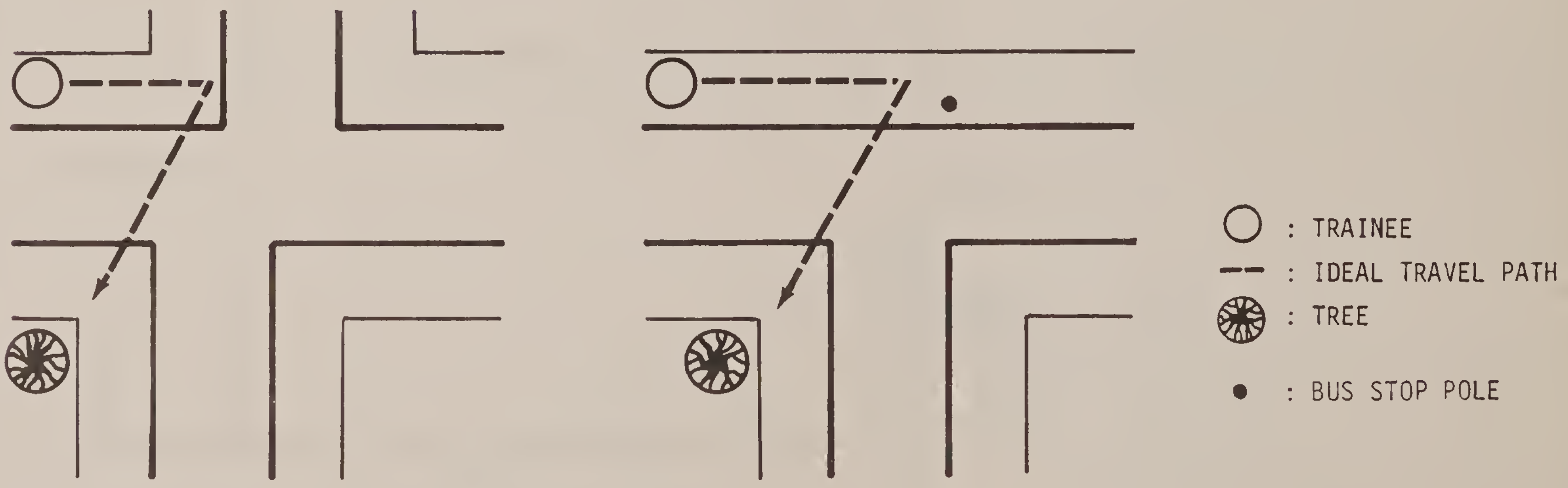
Trainee will try to make a straight corner-to-corner crossing at an offset intersection, or a crossing from the non-intersected block to a corner of the intersected block at a "T" intersection. He will do this by detecting and heading toward a landmark on the "destination" corner and, as in the case of a "T" intersection, by finding the crossing point with the help of a landmark such as a tree or pole.

Purpose:

1) Test trainee's ability to make a straight corner-to-corner crossing at an offset intersection (or from a non-intersected block) through detection and use of landmark(s) on his "destination" corner.

2) Test trainee's ability to locate and use a landmark in order to line up for crossing.

Diagram : VARIATION



Test Location:

DATA RECORDING

(L2)

Pre-Test (G01)
Date__________
Specify aid used
____

Post-Test (G02)
Date__________
Specify aid used
____

Re-Test (G03)
Date__________
Specify aid used
____

Equipment Needs

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Notes/Remarks: ______________________________

____

____

____ (G04)

Examiner's Instructions:

If trainee has never encountered an offset or "T" intersection, explain the terms and their meanings to him. Take trainee to the intersection you have selected. Describe the landmark which he should use in lining up to cross, and the landmark on the corner to which he is crossing (e.g., a pole, tree, hedge, etc.).

Then SAY: "You are now at an offset intersection (or a "T" intersection). After you are lined up to cross the street, cross when you believe it is safe. As you cross try to go directly to the (examiner indicates corner, e.g., N.E./N.W./S.E./S.W.) corner. Are the instructions clear? Please begin." (SCORE ITEMS G05-G07)

NOTE: Examiner should stay near trainee to assist if trainee makes an incorrect judgment as to when it is safe to cross.

Criteria	Pre	Post	Re
G05 Trainee crosses corner-to-corner.			
G06 Trainee detects landmark which indicates crossing point.			
G07 Trainee detects and heads toward landmark on destination corner.			

SUMMARY SCORE SHEET

PROCEDURES

The following two pages are to help you assess the trainee's performance in Level 2.

The first summary sheet is for entries on "Yes-No" items. This form allows the instructor and the trainee to see how well the student has performed on each of eleven instructional outcomes.

In Level 2, for example, four items relate to the Ability to Control/Correct Veer. They appear in Performance Exercises 5 and 7. Using the space provided to the right side of the form, the instructor should enter the number of "Yes" scores and the number of "No" scores on the pretest for these items. After posttesting is completed for Level 2 the same procedure is followed and the new number of "Yes" scores and "No" scores is entered. The extent of progress shown by the trainee on each instructional outcome is represented by the increase in "Yes" scores between the pretest and posttest.

The second summary sheet is for numerical items. This form allows the instructor to summarize improvements of three types: contact errors, elapsed time, and environmental detections. Each numerical item in Level 2 is indicated in the lefthand column and space is provided for the instructor to transfer the numerical pretest and posttest scores.

In Level 2, for example, three items relate to elapsed time and two items relate to environmental detections. After entering the pretest and posttest data, the instructor should check whether improvement was shown, and then complete the bottom of the form.

LEVEL 2--PERFORMANCE EXERCISES

SUMMARY SHEET--YES/NO ENTRIES

Instructional Outcomes	Performance Exercises 1	2	3	4	5	6	7	Total Pretest	Total Posttest
ABILITY TO CONTROL/ CORRECT VEER					E06 E09 E11		G05	yes____ no ____	yes____ no ____
ABILITY TO ESTABLISH AND MAINTAIN ORIENTATION		B08 B09 B10 B11				F05 F06		yes____ no ____	yes____ no ____
ABILITY TO TRAVEL WITH INCREASED EFFICIENCY AND SAFETY		B08 B09 B10		D05 D06 D09 D10 D11	E05 E06 E07 E08 E09 E10 E11 E12		G05 G07	yes____ no ____	yes____ no ____
ABILITY TO TRAVEL WITH A MINIMUM OF DEVIANT PERIPATETIC BEHAVIOR	A06 A08		C05	D07 D11			G05	yes____ no ____	yes____ no ____
ABILITY TO TRANSFER ENVIRONMENTAL ELEMENTS RECOGNITION AMONG TYPICAL ENVIRONMENTS		B09						yes____ no ____	yes____ no ____
ABILITY TO USE PUBLIC TRANSPORTATION				D09 D10		F05 F07		yes____ no ____	yes____ no ____
AVOIDANCE OF OBSTACLES					E05 E07 E08 E10 E12	F05 F06		yes____ no ____	yes____ no ____
INCREASED CONTROL IN INTERACTIONS WITH SIGHTED PUBLIC					E05 E07 E10 E12	F05 F06 F07		yes____ no ____	yes____ no ____
USE OF AMBIENT SOUND								yes____ no ____	yes____ no ____
USE OF/INTERACTION WITH SHORELINE	A06 A08		C05	D05 D06 D07	E06 E09 E11 E13			yes____ no ____	yes____ no ____
USE OF LANDMARKS		B08 B09	C05 C06	D05 D09 D11			G06 G07	yes____ no ____	yes____ no ____

LEVEL 2 - PERFORMANCE EXERCISES

SUMMARY SHEET - NUMERICAL ENTRIES

Item Number	Contact Errors		Check if Improvement Shown	Elapsed Time		Check if Improvement Shown	Environmental Detections		Check if Improvement Shown
	Pre	Post		Pre	Post		Pre	Post	
A05							____	____	____
A07							____	____	____
D08				____	____	____			
D12				____	____	____			
E14				____	____	____			
1. Total number of items		____			3			2	
2. Number of items attempted		____			____			____	
3. Number of items showing improvement		____			____			____	

LEVEL 3
PERFORMANCE EXERCISES

Unstructured Settings

o o o

Independent Travel

INTRODUCTION

The eight exercises which are contained in Level 3 are selected to give an indication of trainee performance *before* and *after* he or she has received training in independent travel situations, such as travel in business environments and the community at large. It is assumed that the settings in these exercises can be approximated with reasonable consistency even though particular business areas and communities vary considerably. It is anticipated that numerous unstructured occurrences will take place in each of these exercises. For example, auto traffic and pedestrian activity can only be influenced in a very modest way by a limited amount of prearrangement. (Such prearrangement is only to facilitate testing, and attempts to assure that expected events will in fact take place.)

It is recognized that these criterion exercises only represent a small portion of the assessments that could logically occur at this point in training. The number of exercises has been held to a minimum consistent with the need to maintain a favorable ratio between training time and testing time. Nevertheless, it is believed that the selection of exercises does provide a useful and balanced perspective on student progress.

EXERCISE 1

LEVEL 3

- USE OF/INTERACTION WITH SHORELINE
- ABILITY TO TRAVEL WITH INCREASED EFFICIENCY AND SAFETY.
- ABILITY TO TRAVEL WITH A MINIMUM OF DEVIANT PERIPATETIC BEHAVIOR

Setting:

About I block which has a gas station on one corner and also has buildings which present a very irregular or cluttered shoreline (e.g., shop fronts with bikes, newspaper stands, vending machines, sidewalk sale counters, or etc., in front of them on the sidewalk).

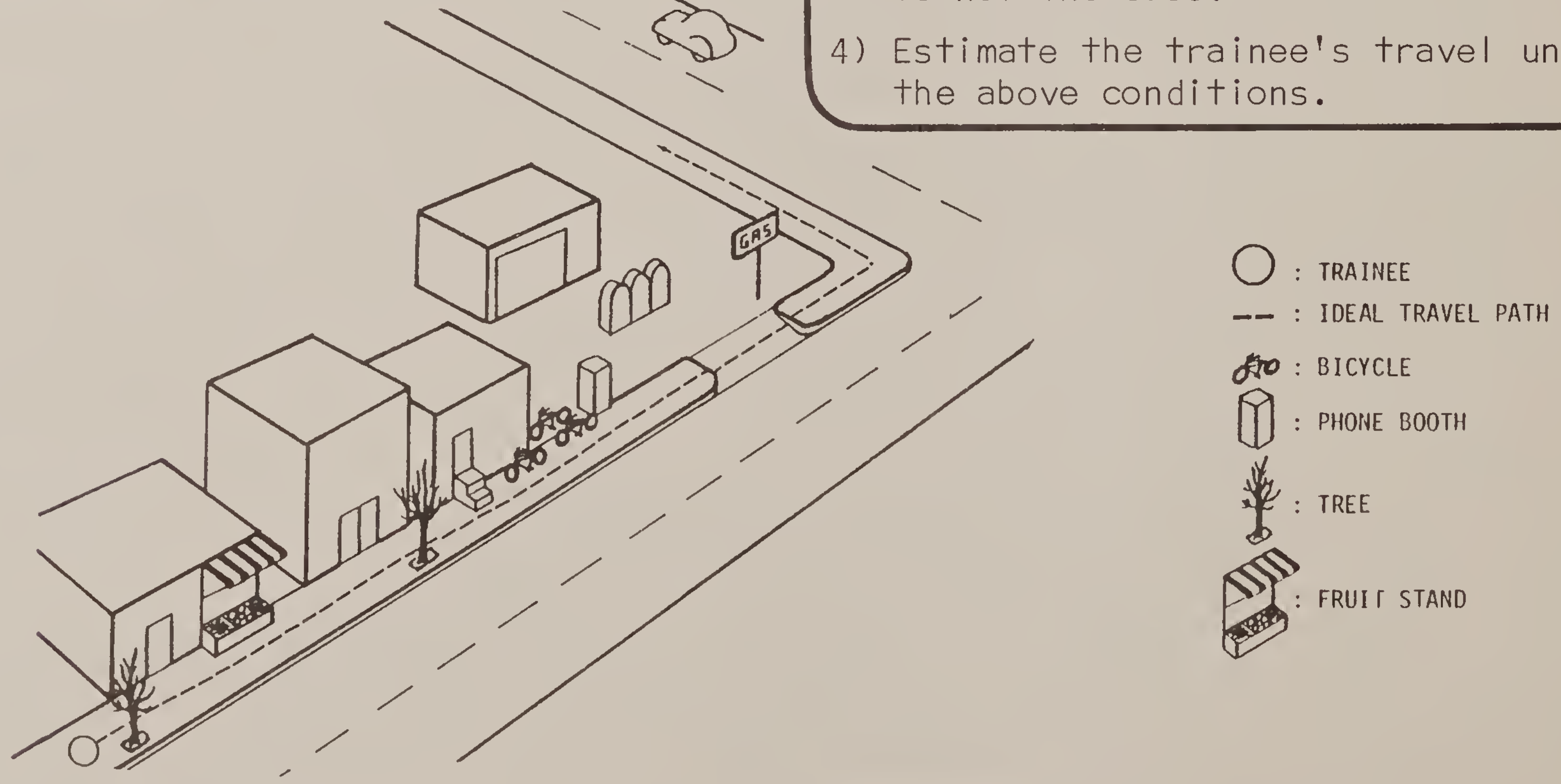
Conditions:

The trainee will begin at the corner which does not have a gas station, and will walk along the block, passing the irregular or cluttered shoreline, towards the corner which does have a gas station. He will try to maintain a straight line of travel, to avoid contact with obstacles, and to turn the corner as soon as he thinks he has reached the end of the block.

Purpose:

1) Test trainee's ability to avoid contact with obstacles when traveling alongside an irregular or cluttered shoreline.
2) Test trainee's ability to maintain a straight line of travel when alongside an irregular or cluttered shoreline, and in the absence of any vertical shoreline.
3) Test the likelihood of the trainee's interpreting a significant break in the vertical shoreline to indicate the end of a block, when such is not the case.
4) Estimate the trainee's travel under the above conditions.

Diagram: VARIATION



Test Location:

DATA RECORDING

(L3)

Pre-Test (A01)
Date____________
Specify aid used
____

Post-Test (A02)
Date____________
Specify aid used
____

Re-Test (A03)
Date____________
Specify aid used
____

Equipment Needs

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⬡	
⬡	
⏱	1
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⊙	
🧍	

bike

Notes/Remarks:______________________________
____
____
____________________________________(A04)

Examiner's Instructions:

Take the trainee to the beginning of the route. SAY: "I'd like you to walk forward along the block ahead of you. Please try to maintain as straight a line of travel as possible. Also try to avoid any cane or body contact with obstacles which may be along the route. As soon as you think you have reached the corner, please turn the corner. Are the instructions clear? Please begin."

(SCORE ITEMS A05-A08)

Criteria	Pre	Post	Re
A05 NUMBER OF CONTACTS WITH OBSTACLES ALONG ROUTE			
A06 Trainee maintains an essentially straight line of travel (until turning corner).			
A07 Trainee avoids walking into, or turning into, gas station.			
A08 TOTAL TIME ELAPSED WHILE EXECUTING ITEMS A05-A07			

EXERCISE 2

LEVEL 3

- INCREASED CONTROL IN INTERACTIONS WITH SIGHTED PUBLIC
- ABILITY TO TRAVEL WITH INCREASED EFFICIENCY AND SAFETY

Setting:

Outdoor. A small-to-medium business area with light but continuous pedestrian traffic.

Conditions:

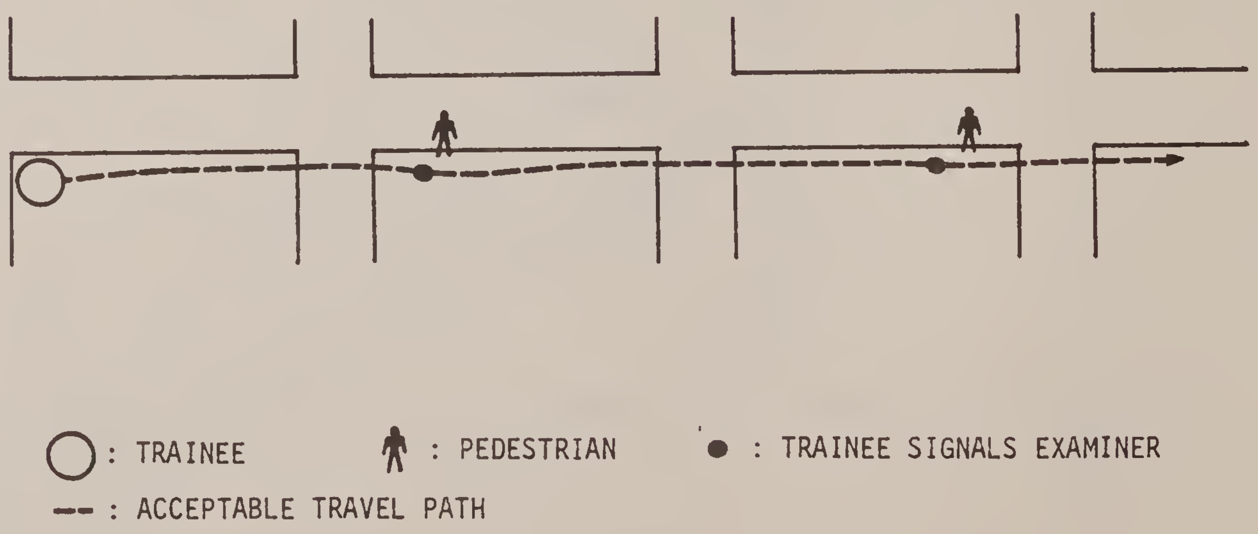
The trainee will walk for 3 blocks in a small-to-medium business area, attempting to locate pedestrians from whom he could solicit aid.

Each time the trainee locates such a pedestrian, he will indicate this by a silent signal to the examiner. He will try to avoid making cane or body contact with obstacles (including pedestrians) along his route.

Purpose:

1) Test trainee's ability to locate pedestrians from whom to solicit aid.
2) Test trainee's ability to avoid cane or body contact with obstacles while preoccupied with another task during travel.

Diagram :



Test Location:

DATA RECORDING

(L3)

Pre-Test (B01)
Date ____________
Specify aid used
____

Post-Test (B02)
Date ____________
Specify aid used
____

Re-Test (B03)
Date ____________
Specify aid used
____

Equipment Needs

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⬡	
⏱	
🪑	
⊙	
🧍	2

tally sheet;
pencil

Notes/Remarks: ____________________
____
____
____________________ (B04)

Examiner's Instructions:

Guide trainee to starting position 3 blocks from end of route. SAY: "We are going to check on how well you could locate other pedestrians in order to solicit aid if you needed to do so. I don't want you to actually solicit aid, but as you walk ahead for 3 blocks, I'll be behind you and I'd like you to signal me every time you detect a pedestrian from whom you think you could solicit aid - in other words, you know where he is, so you could walk up to him and ask for information. Signal me each time you detect such a pedestrian by putting your left/right hand behind your back. Signal me as soon as you detect him, and stop signalling as soon as you've passed him or he has moved too far away to be useful. Stop when you've walked 3 blocks. Try not to run into any people or obstacles along the way. Are the instructions clear? Please begin." Observe trainee carefully, so you can score criteria items.

(SCORE ITEMS B05-B07 AFTER TRAINEE EXECUTES EXERCISE.)

Criteria	Pre	Post	Re
B05 TOTAL NUMBER OF TIMES TRAINEE IS CORRECT IN INDICATING AN ACCESSIBLE PEDESTRIAN, MINUS THE TOTAL NUMBER OF TIMES TRAINEE FAILS TO INDICATE ACCESSIBLE PEDESTRIAN			
B06 TOTAL NUMBER OF C.C./B.C. WITH OBSTACLES			
B07 TOTAL NUMBER OF C.C. WITH PEDESTRIANS			

EXERCISE 3

LEVEL 3

- INCREASED CONTROL IN INTERACTIONS WITH SIGHTED PUBLIC
- ABILITY TO TRAVEL WITH INCREASED EFFICIENCY AND SAFETY

Setting:

Outdoor. A small-to-medium business area unfamiliar to trainee, with light vehicular traffic and light but constant pedestrian traffic.

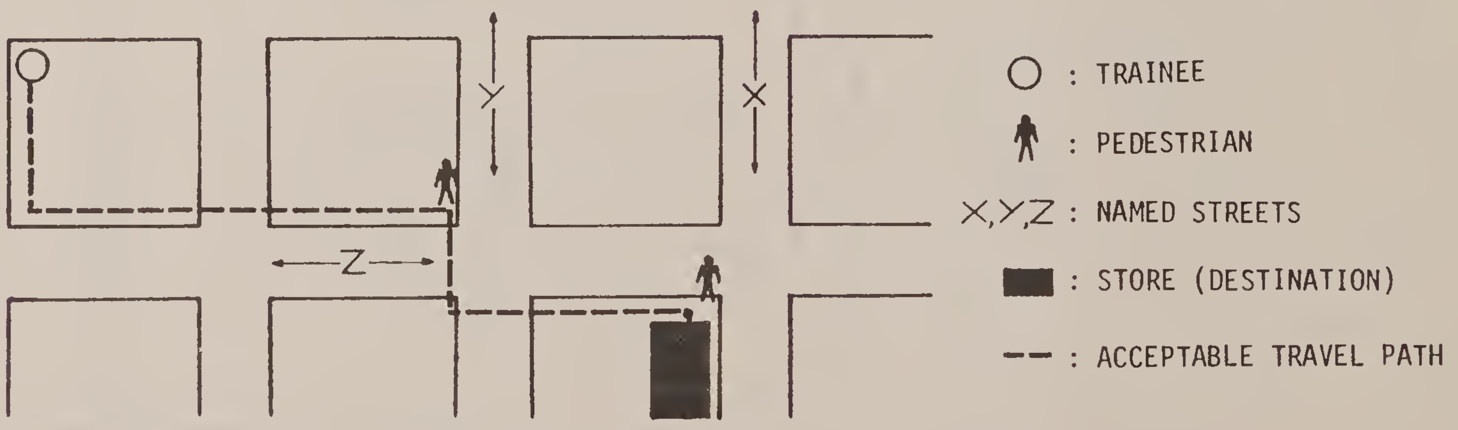
Conditions:

Knowing the cardinal direction in which he is facing, the name of the place of business which is his destination, the name of the street on which it is located, and the names of the 2 streets intersecting the block on which it is located, the trainee will begin 4 blocks away and attempt to reach his destination through gathering additional necessary information by soliciting aid from other pedestrians.

Purpose:

1) Test trainee's ability to avoid cane or body contact with obstacles when traveling under stress in an unfamiliar area.
2) Test trainee's ability to locate pedestrians from whom to solicit aid.
3) Test trainee's ability to reach a specific destination through information acquired by solicitation of aid.

Diagram : VARIATION



VARIATION

Test Location:

DATA RECORDING

(L3)

Pre-Test(C01)
Date____________
Specify aid used
____

Post-Test(C02)
Date____________
Specify aid used
____

Re-Test(C03)
Date____________
Specify aid used
____

Equipment Needs

⊥	
📦	
⬡	
⏱	1
🪑	
⊙	
🧍	2

tally sheet;
pencil

Notes/Remarks:______________________________
____
____
______________________________________(C04)

Examiner's Instructions:

Guide trainee to starting position on a street 3 blocks from, and perpendicular to his destination. Tell trainee the name of the business you wish him to find, the name of the street it is on, and the names of perpendicular streets intersecting the block it is on. Tell him the cardinal direction he is facing. Ask him to solicit aid for other necessary information at the earliest opportunity and as often as necessary thereafter. "Plant" a participant near start if pedestrians are absent there.

Stay close enough to note any difficulties trainee has in locating pedestrians for aid, and to record number of C.C./B.C. made with obstacles. Allow 45 minutes to complete exercise after giving instructions. Do not intervene unless trainee is 2 blocks off course or intervention is needed for safety.

As trainee executes exercise, tally the number of times he makes unwanted/accidental C.C. or B.C. with obstacles (including other pedestrians). (SCORE ITEMS C05-C10 AFTER TRAINEE EXECUTES EXERCISE.)

Criteria	Pre	Post	Re
C05 GIVE NUMBER OF C.C. WITH OBSTACLES.			
C06 GIVE NUMBER OF B.C. WITH OBSTACLES.			
C07 Trainee reaches street on which destination is located.			
C08 Trainee reaches block on which destination is located.			
C09 Trainee reaches destination.			
C10 GIVE NUMBER OF C.C. WITH PEDESTRIANS.			

EXERCISE 4

LEVEL 3

- USE OF LANDMARKS
- INTERACTION WITH SHORELINES
- ABILITY TO ESTABLISH AND MAINTAIN ORIENTATION

Setting:

Outdoor. Unfamiliar route in residential area with little pedestrian or vehicle traffic. Both inner and outer shorelines must present a variety of elements (e.g., trees, poles, hedges, fences, walls, openings, etc.).

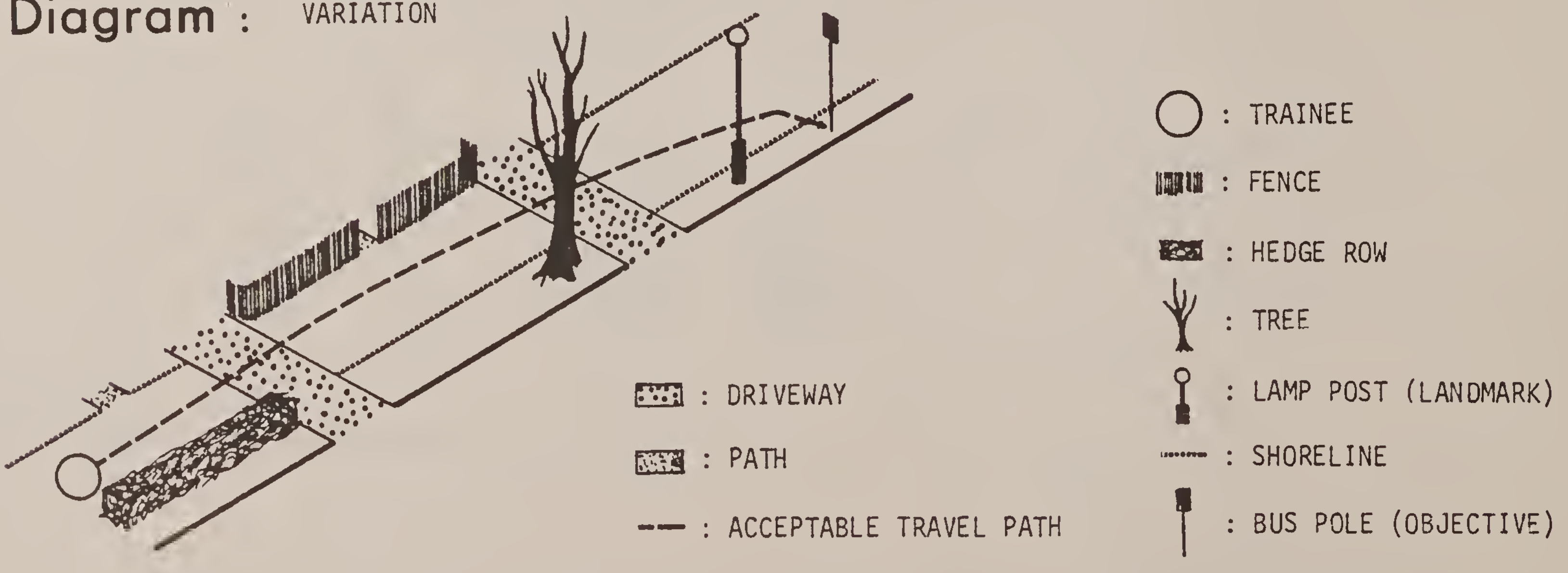
Conditions:

The trainee will walk about 1 block seeking a destination selected by the examiner, for which the examiner will select a landmark. The examiner will acquaint trainee with this landmark through verbal description only. (Suggested destination: pole, pathway to a house.) Trainee will verbally indicate any salient elements in the environment which he notices while en route to his destination. Trainee will also indicate any such elements adjacent to his destination which could be directly & specifically helpful as additions to or substitutions for the landmark provided by the examiner. (There will be at least 1 such potential additional landmark present.)

Purpose:

1) Test extent to which trainee can familiarize himself with a new area during his first exposure to the area.
2) Test extent to which unsought elements, lateral to the travel path are accessible to trainee.

Diagram : VARIATION



Test Location:

DATA RECORDING

(L3)

Pre-Test (D01)
Date__________
Specify aid used
____

Post-Test (D02)
Date__________
Specify aid used
____

Re-Test (D03)
Date__________
Specify aid used
____

Equipment Needs

🦯	
▨	
⬡	
⏱	
🪑	
⊙	
🚶	

tally sheet; pencil

Notes/Remarks: ____________________

____

____

(D04) ____________________

Examiner's Instructions:

Take trainee to beginning of route. SAY: "I'd like you to start at this corner and locate (examiner names destination) that is about a block away. The landmark for (destination) is (examiner describes landmark). As you go toward your objective, try to maintain as straight a line of travel as you can, and whenever you detect an object in or beside your path, please stop for a moment and tell me that you detect something, and tell me anything that you can about what you detect. Are the instructions clear? Please begin."

To score items D05 & D06, it is suggested that the examiner make tally marks to total after exercise is completed. If trainee says he detects an object/environmental element which is not present, discount it in scoring but do not correct trainee during exercise. After trainee has located his objective (if trainee does not locate objective, you should guide him to it and point out the landmark you described, then continue with instructions below), SAY: "Now that you have reached your destination, see if you can detect any other landmarks that could be added to the one I described to you, or that could be substituted for the one I described to help a traveler find this destination." Let trainee look for possible landmarks before answering. (SCORE ITEMS D05-D11)

Criteria	Pre	Post	Re
D05 NUMBER OF TIMES TRAINEE CORRECTLY INDICATES OBJECT IS PRESENT			
D06 NUMBER OF TIMES TRAINEE GIVES CORRECT ADDITIONAL INFORMATION ON THE NATURE AND LOCATION OF THE DETECTED OBJECT			
D07 Trainee detects and recognizes examiner-provided landmark.			
D08 Trainee locates destination.			
D09 Trainee maintains essentially straight line of travel over most of route.			
D10 NUMBER OF ADDITIONAL LANDMARKS TRAINEE INDICATES			
D11 NUMBER OF POSSIBLE SUBSTITUTE LANDMARKS TRAINEE INDICATES			

EXERCISE 5

LEVEL 3

- INCREASED CONTROL IN INTERACTIONS WITH SIGHTED PUBLIC
- ABILITY TO TRANSFER ENVIRONMENTAL ELEMENT RECOGNITION SKILLS
- ABILITY TO ESTABLISH AND MAINTAIN ORIENTATION

Setting:

Part A: Verbal.

Part B: Indoor. Inside a bank branch office during "slow" business hours.

Conditions:

Part A: The trainee will name, and give a brief general description of at least 3 environmental elements typical of a commonly encountered environment, the interior of a bank. His description will include at least one example of a typical spatial relationship of these elements to the entrance door of a bank.

Part B: The trainee will be escorted to an unfamiliar bank during its "slow" business hours (NOT during "peak" business hours!), and will attempt to locate 3 of the environmental elements he named and described in Part A. Make prior arrangements with the bank.

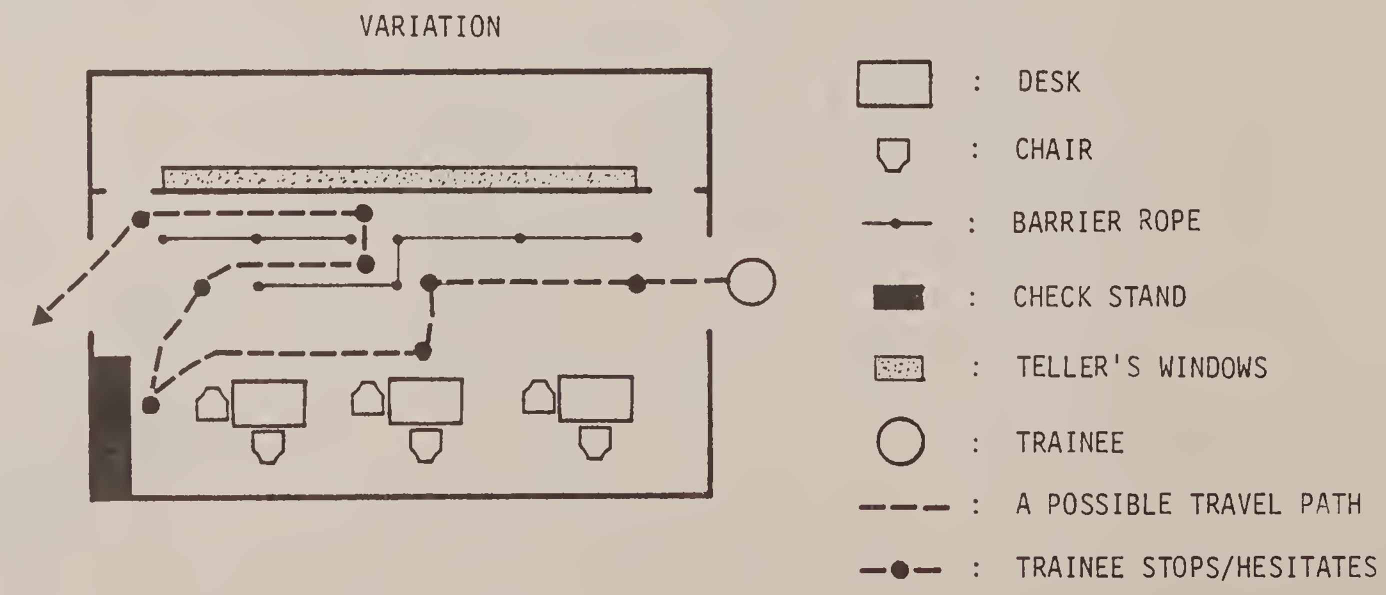
Purpose:

1) Test the extent of trainee's familiarity with a type of environment commonly encountered by most adults in the course of daily living.

2) Test trainee's ability to transfer environmental-element-recognition among typical environments in which similar elements are commonly found.

3) Test trainee's ability to avoid cane or body contact with human "obstacles" while seeking objectives in the above environment.

Diagram :



Test Location:

DATA RECORDING

(L3)

Pre-Test(E01)
Date ____________
Specify aid used
____

Post-Test(E02)
Date ____________
Specify aid used
____

Re-Test(E03)
Date ____________
Specify aid used
____

Notes/Remarks: ____
____
____
____ (E04)

Equipment Needs

⚲	
▦	
⬡	
⏱	
🪑	
◎	
🧍	

Part A: tally sheet, pencil

Examiner's Instructions:

Part A: SAY: "As you enter a theatre, you might expect to find the lobby, and maybe a candy counter in the lobby. If you went forward through the lobby, you'd expect to find doors to the area where the movie would be shown; they might be on either side of the candy counter, and as you went through those doors, you'd expect to find an aisle in front of you, and on either side of the aisle, rows of seats. Now I'd like you to tell me about some things you might expect to find inside a bank, and where you would expect to find them." (SCORE ITEM E05 AS TRAINEE EXECUTES EXERCISE)

Note those elements for which trainee gives most appropriate description and position.

Part B: Take trainee to a bank. Stop just outside the door. SAY: "We are at the door of a bank. I'd like you to enter and locate (examiner names as many elements as were noted during Part A, not to exceed 5). I'll be right behind you, and when you think you've located one of the items, stop and tell me where and what you think it is. Take your time. Try not to run into other people in the bank." (SCORE ITEMS E06-E08)

Criteria	Pre	Post	Re
E05 Trainee names & describes at least 3 environmental elements typical of the inside of a bank, giving some indication of their probable spatial relationships to the entrance.			
E06 TOTAL NUMBER OF (SPECIFIED) ENVIRONMENTAL ELEMENTS LOCATED BY TRAINEE			
E07 TOTAL NUMBER OF C.C. WITH OTHER PEOPLE WHILE SEEKING SPECIFIED ENVIRONMENTAL ELEMENTS			
E08 TOTAL NUMBER OF C.C. WITH OBSTACLES WHILE SEEKING SPECIFIED ENVIRONMENTAL ELEMENTS			

EXERCISE 6

LEVEL 3

- ABILITY TO RECOGNIZE TYPICAL ENVIRONMENTAL ELEMENTS
- USE OF AMBIENT SOUND
- ABILITY TO TRAVEL WITH INCREASED EFFICIENCY AND SAFETY

Setting:

A business setting is to be selected that has aisles and cash registers towards the front of the store (e.g., grocery store, "dime" store).

Conditions:

The trainee should have been inside similar stores during training, but definitely not this same store. The trainee is to accomplish an "errand" in this setting.

Purpose:

Test trainee's ability to negotiate an interior setting involving aisles, counters, and checkout lines, and to establish basic orientation, locating several specific destinations there on the basis of brief verbal directions.

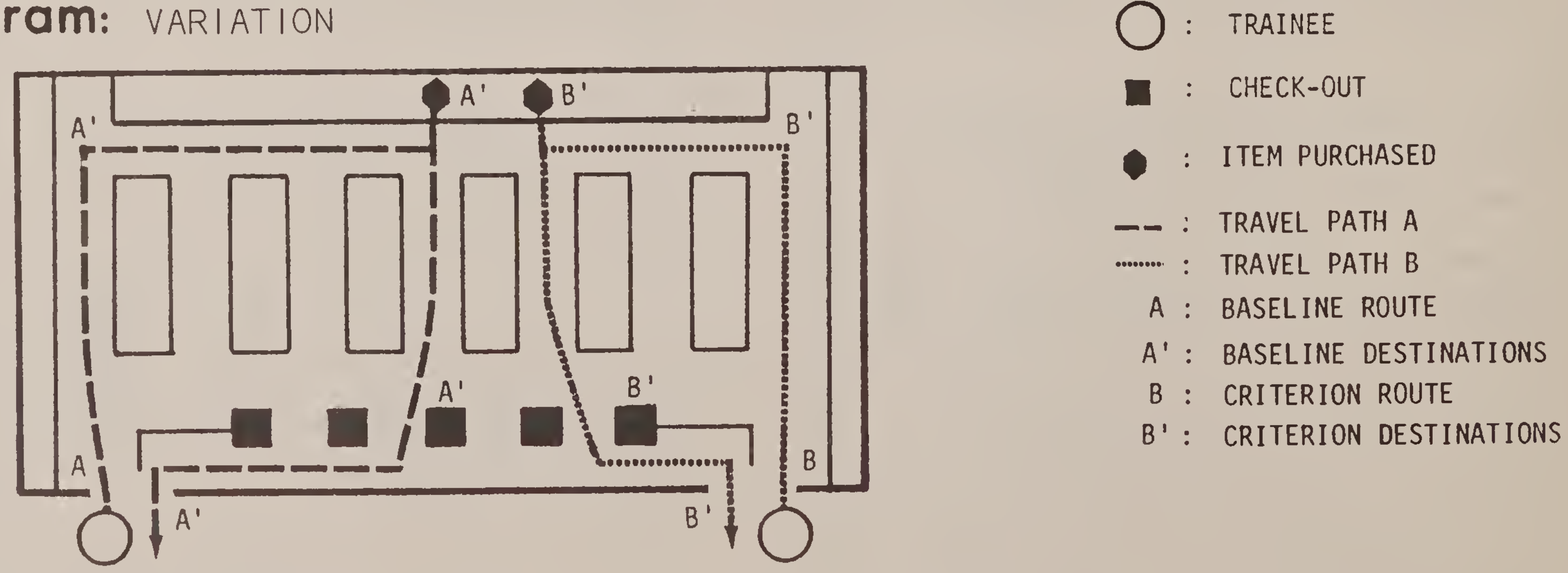
Examiner's Instructions

SAY: "We're facing the doors to the (retail store). It is similar in layout to (name store previously visited). I'd like you to go in and (examiner gives directions to counter which has the item to be purchased--directions must include at least one turn, and travel along at least two aisles). When you locate the (name) counter, select a (name item*), then go take your place in the cash register line. After paying for the (name item) leave the store through the doors by which you entered. Try to do these things without soliciting aid. Are the instructions clear? Please begin."

---

*It is suggested that the item to be purchased be tactile and readily identifiable, such as a loaf of bread, an orange, a pocket comb.

Diagram: VARIATION



Test Location:

DATA RECORDING

(L3)

	(PRETEST) ROUTE A	(POSTTEST) ROUTE B
Dates of Store Exercises	(F01)	(F04)
Type of ETA Used	N/A	(F05)
Type of Store Used	(F02)	(F06)
Route Description (as given to trainee)	(F03)	(F07)

	Criteria	ROUTE A (PRE)	ROUTE B (POST)
F08	Follows designated route		
F09	Locates item counter (destination)		
F10	Locates checkout counter		
F11	Locates entrance again		
F12	Solicits aid no more than twice		
F13	NUMBER OF CANE- OR BODY- CONTACTS WITH OBSTACLES/OTHER PEOPLE ALONG ROUTE		
F14	TIME ELAPSED BETWEEN ENTERING AND LEAVING STORE		

REMARKS
(Pretest) A:

(F15)

(Posttest) B (Indicate any ways in which ETA use influenced performance, etc.):

(F16)

EXERCISE 7

LEVEL 3

- ABILITY TO ESTABLISH AND MAINTAIN ORIENTATION
- AVOIDANCE OF OBSTACLES
- ABILITY TO TRAVEL WITH INCREASED EFFICIENCY AND SAFETY

Purpose:

Test trainee's ability to establish his whereabouts in an area to which he has been given brief prior orientation, and to determine appropriate travel paths to destinations in that area.

Setting:

Shopping mall not familiar to trainee until examiner provides familiarization (see Conditions).

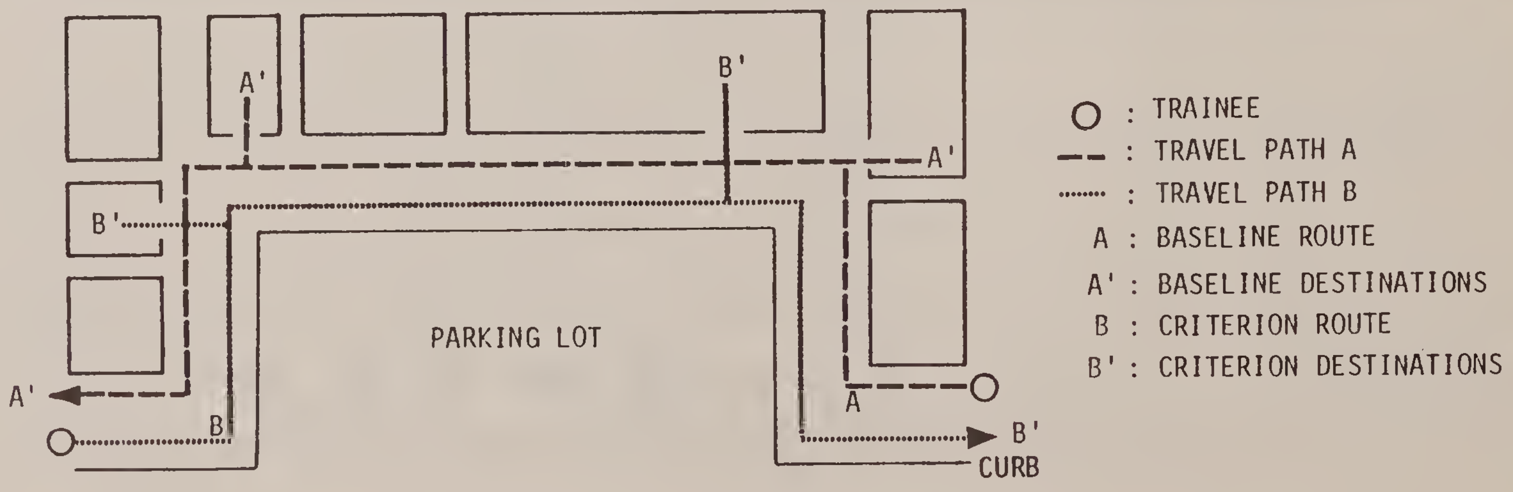
Conditions:

Following 1/2 hour of active familiarization with the main characteristics and layout of a shopping center, the trainee will be returned another day to the shopping center by car. Upon alighting, the trainee will be told to determine his whereabouts, accomplish two "errands," and return to a specific point. Assistance from pedestrians is not to be sought unless the trainee is unable to establish his whereabouts through use of the ETA.

Examiner's Instructions:

SAY: "I have just brought you to the (name) shopping center. You will recall that we have been here before to help you get familiar with where the various stores are located. First, I'd like you to determine just where you are now, then go into the (name store); then walk over to the (name store), where you should again go inside; finally, go to the (name destination, e.g., mailbox or bus stop). Seek information from passersby only if you have to. Are the instructions clear? Please begin." (SCORE ITEMS G10 - G16.) DO NOT SELECT SAME DESTINATIONS FOR POSTTEST AS FOR PRETEST.

Diagram:



Test Location:

DATA RECORDING

(L3)

	(PRETEST) ROUTE A	(POSTTEST) ROUTE B
Date of Familiarization	(G01)	(G05)
Date of Drop-off Exercise	(G02	(G06)
Type of ETA used	N/A	(G07)
Shopping Center Used	(G03)	(G08)
Description of Route (as given to trainee)	(G04)	(G09)

Criteria

		ROUTE A (PRE)	ROUTE B (POST)
G10	Independently orients self		
G11	Locates first destination		
G12	Locates second destination		
G13	Locates third destination		
G14	Solicits aid no more than twice		
G15	NUMBER OF TIMES TRAINEE MADE CANE- OR BODY-CONTACT WITH OBSTACLES/PEDESTRIANS		
G16	ELAPSED TIME UNTIL THIRD DESTINATION		

REMARKS (Pretest) A: ______________________________

____

______________________________ (G17)

(Posttest) B (aspects of performance in which the ETA affected orientation and mobility): ______________________________

____

______________________________ (G18)

EXERCISE 8

LEVEL 3

- USE OF LANDMARKS
- ABILITY TO TRAVEL WITH INCREASED EFFICIENCY AND SAFETY
- AVOIDANCE OF OBSTACLES

Purpose:

Test trainee's ability to travel over an extended route in an unfamiliar area to a given destination, recognizing landmarks along the way on the basis of verbal orientation to them.

Conditions:

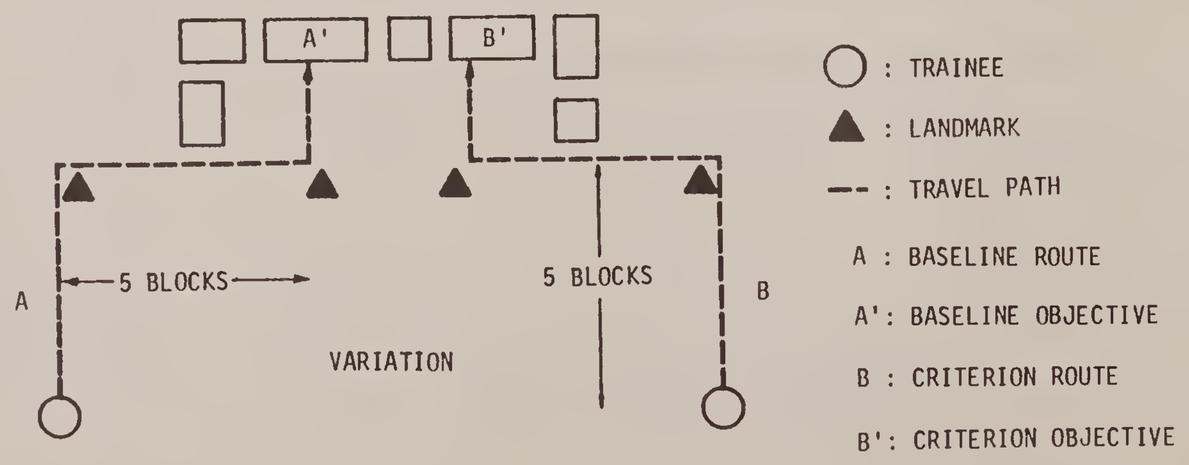
On each route the trainee is to travel 5 residential blocks followed by 5 blocks in a small or medium sized business area. There are to be 2 landmarks which signal turns at the halfway point and close to the destination. Route A is intended to be a baseline assessment of performance without the use of an ETA. Route B is a criterion exercise following training, and using whichever ETA has been taught.

Examiner's Instructions:

SAY: "We are about 10 blocks from (shopping center). I would like you to walk there and go to the (store). When you arrive, find the front door and wait for me there. Along the way, you should watch for (1st landmark), five blocks straight ahead. There you'll turn (direction) and proceed another five blocks until you find (2nd landmark). The (name) store is (distance and direction) from that (landmark). If you feel the need, you may ask directions along the way, but try to do it on your own as much as possible. I'll accompany you to help if you really get stuck. As you go along try to find additional landmarks so you can tell me about them later. Are the instructions clear? Please begin."

Following each exercise ask the trainee to name landmarks or other environmental features he noted along the way which would be helpful in making another trip. (SCORE ITEMS H08 - H14)

Diagram :



Test Location:

DATA RECORDING

(L3)

	(PRETEST) ROUTE A	(POSTTEST) ROUTE B
Dates of Route Exercises	(H01)	(H04)
Type of ETA Used	N/A	(H05)
Route Descriptions (as given to trainee)	(H02)	(H06)
	(H03)	(H07)

Criteria

		ROUTE A (PRE)	ROUTE B (POST)
H08	Locates landmark #1 (first try)		
H09	Locates landmark #2 (first try)		
H10	Locates destination store		
H11	Solicits aid no more than once		
H12	NUMBER OF OBSTACLES BODY-CONTACTED		
H13	APPROXIMATE TRAVEL TIME (NEAREST 5 MINUTES)		
H14	NUMBER OF ADDITIONAL ENVIRONMENTAL FEATURES NOTED ALONG THE WAY		

REMARKS: (Problems encountered in Route A that were achieved better in Route B, such as general appearances or unintended cane contacts, aspects of performance in which ETA had significant role.)

(H15)

SUMMARY SCORE SHEET

PROCEDURES

The following two pages are to help you assess the trainee's performance in Level 3.

The first summary sheet is for entries on "Yes-No" items. This form allows the instructor and the trainee to see how well the student has performed on each of eleven instructional outcomes.

In Level 3, for example, 17 items relate to the Ability to Establish and Maintain Orientation. They appear in Performance Exercises 1, 3, 4, 6, 7, and 8. Using the space provided to the right side of the form, the instructor should enter the number of "Yes" scores and the number of "No" scores on the pretest for these items. After posttesting is completed for Level 3 the same procedure is followed and the new number of "Yes" scores and "No" scores is entered. The extent of progress shown by the trainee on each instructional outcome is represented by the increase in "Yes" scores between the pretest and posttest.

The second summary sheet is for numerical items. This form allows the instructor to summarize improvements of three types: contact errors, elapsed time, and environmental detections. Each numerical item in Level 3 is indicated in the lefthand column and space is provided for the instructor to transfer the numerical pretest and posttest scores.

In Level 3, for example, eleven items relate to contact errors, four items relate to elapsed time, and seven items relate to environmental detections. After entering the pretest and posttest data, the instructor should check whether improvement was shown, and then complete the bottom of the form.

LEVEL 3--PERFORMANCE EXERCISES

SUMMARY SHEET--YES/NO ENTRIES

Instructional Outcomes	Performance Exercises								Total Pretest	Total Posttest
	1	2	3	4	5	6	7	8		
ABILITY TO CONTROL/ CORRECT VEER									yes____ no ____	yes____ no ____
ABILITY TO ESTABLISH AND MAINTAIN ORIENTATION	A07		C07 C08 C09	D07		F08 F11 F12	G10 G11 G12 G13 G14	H08 H09 H10 H11	yes____ no ____	yes____ no ____
ABILITY TO TRAVEL WITH INCREASED EFFICIENCY AND SAFETY	A06 A07		C07 C08 C09	D07 D08		F12	G14	H11	yes____ no ____	yes____ no ____
ABILITY TO TRAVEL WITH A MINIMUM OF DEVIANT PERIPATETIC BEHAVIOR	A06			D09					yes____ no ____	yes____ no ____
ABILITY TO TRANSFER ENVIRONMENTAL ELEMENTS RECOGNITION AMONG TYPICAL ENVIRONMENTS					E05	F09 F10	G10		yes____ no ____	yes____ no ____
ABILITY TO USE PUBLIC TRANSPORTATION									yes____ no ____	yes____ no ____
AVOIDANCE OF OBSTACLES									yes____ no ____	yes____ no ____
INCREASED CONTROL IN INTERACTIONS WITH SIGHTED PUBLIC			C07 C08 C09						yes____ no ____	yes____ no ____
USE OF AMBIENT SOUND						F10			yes____ no ____	yes____ no ____
USE OF/INTERACTION WITH SHORELINE	A06 A07								yes____ no ____	yes____ no ____
USE OF LANDMARKS				D07 D08		F09 F12	G11 G12 G13 G14	H08 H09 H10 H11	yes____ no ____	yes____ no ____

LEVEL 3 - PERFORMANCE EXERCISES

SUMMARY SHEET - NUMERICAL ENTRIES

Item Number	Contact Errors		Check if Improvement Shown	Elapsed Time		Check if Improvement Shown	Environmental Detections		Check if Improvement Shown
	Pre	Post		Pre	Post		Pre	Post	
A05	___	___	___						
A08				___	___	___			
B05							___	___	___
B06	___	___	___						
B07	___	___	___						
C05	___	___	___						
C06	___	___	___						
C10	___	___	___						
D05							___	___	___
D06							___	___	___
D10							___	___	___
D11							___	___	___
E06							___	___	___
E07	___	___	___						
E08	___	___	___						
F13	___	___	___						
F14				___	___	___			
G15	___	___	___						
G16				___	___	___			
H12	___	___	___						
H13				___	___	___			
H14							___	___	___
1. Total number of items		11			4			7	
2. Number of items attempted		___			___			___	
3. Number of items showing improvement		___			___			___	

INTERVIEW

Interview

(L4)

Purpose:

To establish the trainee's 1) viewpoint on the adequacy and appropriateness of training, 2) self-appraisal of developed competencies, and 3) appraisal of the importance of the device in terms of his own lifestyle.

Conditions:

Following training, the trainee is to be given an opportunity to express personal views on the training experience and to report any improved performance in various environmental sensing applications.

Examiner's Instructions:

Familiarize yourself with the items before asking questions. Find a place where you and the trainee can have a relaxed discussion. Tell the trainee that you wish to get his personal reactions to the ETA. Initiate an informal discussion. During the discussion, be sure to get answers for each item--by asking direct questions if the answers are not spontaneously given.

Date of interview________________________________ (A01) YES or NO

A02 Does trainee express satisfaction at having been matched with this device rather than any other device? ☐

Trainee's Comments:________________________________

Instructor's Comments:______________________________

A03 Does trainee feel that the type of training he received was appropriate to his needs and abilities? ☐

Trainee's Comments:________________________________

Instructor's Comments:______________________________

A04 Does trainee feel that the training has enabled him to function more independently than previously? ☐

Trainee's Comments:________________________________

Instructor's Comments:______________________________

YES or NO

A05 Does trainee express confidence in his ability to operate the device? ☐

Trainee's Comments: ______________________________

Instructor's Comments: ______________________________

A06 Does trainee describe himself as a more confident traveler in familiar environments? ☐

Trainee's Comments: ______________________________

Instructor's Comments: ______________________________

A07 Does trainee describe himself as a more confident traveler in unfamiliar environments? ☐

Trainee's Comments: ______________________________

Instructor's Comments: ______________________________

A08 Does trainee indicate more confidence in his ability to travel indoors as well as outdoors? ☐

Trainee's Comments: ______________________________

Instructor's Comments: ______________________________

A09 Does trainee plan to continue using the device on a daily or regular basis? ☐

Trainee's Comments: ______________________________

Instructor's Comments: ______________________________

A10 Does trainee plan to use the device often for school or work applications? ☐

Trainee's Comments: ______________________________

Instructor's Comments: ______________________________

A11 Does trainee plan to use the device often for leisure applications? ☐

Trainee's Comments: ______________________________

Instructor's Comments: ______________________________

A12 Has trainee developed any uses for the device beyond orientation and mobility? ☐

Trainee's Comments: ______________________________

Instructor's Comments: ______________________________

A13 Does the trainee feel the device has helped him develop new or better relationships with others? ☐

Trainee's Comments: ______________________________

Instructor's Comments: ______________________________

A14 Would the trainee be frustrated or annoyed if he no longer had the device available for his personal use? ☐

Trainee's Comments: ______________________________

Instructor's Comments: ______________________________

ADDITIONAL COMMENTS: (Suggestions: Comment on plans made for the trainee to obtain a device for personal use, areas of remaining need for skill development, and an estimation of the overall importance of the device for enhancing the individual's living skills.)

(A15)

OVERALL PERFORMANCE EVALUATION

OVERALL PERFORMANCE EVALUATION

PROCEDURES

Three types of forms are provided as tools for evaluating overall effects of training on the trainee's environmental sensing abilities.

The first sheet allows the instructor and trainee to separately evaluate performance on the eleven instructional outcomes. To complete this form, the instructor simply adds the "yes" and "no" posttest scores as shown on the summary sheets for Levels 1, 2, 3 and then enters this total in column 2. Similarly, the entry for column 3 is the sum of all "yes" posttest scores as shown on the Level 1, 2, 3 summaries. When this is completed, the instructor can easily calculate the % of success and % of achievement for each instructional outcome. Note that % of success tells how well the trainee did in relation to those items that were attempted, while % of achievement tells how well the trainee did in relation to the total number of items available in the assessment materials.

The second sheet allows an overall profile of individual achievement (without regard for the different types of instructional outcomes). To complete this form, the instructor should follow the steps in the order shown. Note that for Part A "yes" and "no" performance assessment, the instructor must tally directly from the exercises and not from the summary sheets at the end of each level. (This is necessary because various items appear more than once across the instructional outcomes.) For Part B numerical performance assessments, the instructor can add the information on the summary sheets. The results of these calculations will indicate the trainee's overall success and achievement for the entire course of training.

The third sheet is meant to assist the instructor in interpreting the individual's growth as a result of the ETA training. Instructor judgments are called for on six factors, and should reflect the extent to which the individual reached or surpassed his or her potential. If they are to be meaningful, these judgments should take into account maturity, local conditions, etc., as well as the particular ETA being learned.

PERFORMANCE EVALUATION OF INSTRUCTIONAL OUTCOMES (L5)

	"YES-NO" ASSESSMENTS FOR LEVELS 1, 2, 3 COMBINED					
INSTRUCTIONAL OUTCOMES	Total No. of "Yes-No" Items (all levels) col. 1	Number of items attempted (in posttest) col. 2	Number of items Achieved "Yes" col. 3	% Success (col. 3 ÷ col.2)	% Achievement (col. 3 ÷ col. 1)	
ABILITY TO CONTROL/ CORRECT VEER	8					(A01)
ABILITY TO ESTABLISH AND MAINTAIN ORIENTATION	27					(A02)
ABILITY TO TRAVEL WITH INCREASED EFFICIENCY AND SAFETY	37					(A03)
ABILITY TO TRAVEL WITH A MINIMUM OF DEVIANT PERIPATETIC BEHAVIOR	9					(A04)
ABILITY TO TRANSFER ENVIRONMENTAL ELEMENTS RECOGNITION AMONG TYPICAL ENVIRONMENTS	5					(A05)
ABILITY TO USE PUBLIC TRANSPORTATION	4					(A06)
AVOIDANCE OF OBSTACLES	15					(A07)
INCREASED CONTROL IN INTERACTIONS WITH SIGHTED PUBLIC	12					(A08)
USE OF AMBIENT SOUND	3					(A09)
USE OF/INTERACTION WITH SHORELINE	19					(A10)
USE OF LANDMARKS	30					(A11)

OVERALL PROFILE OF INDIVIDUAL ACHIEVEMENT (L5)
(ALL LEVELS)

A. "YES-NO" PERFORMANCE ASSESSMENTS

1. Total number of "yes-no" items 76 (B01)

2. Number of "yes-no" items scored on pretest (add all items attempted for all exercises) ________ (B02)

3. Number of items scored "yes" on pretest (add all "yes" entries for all exercises) ________ (B03)

④ % of success on pretest (divide #3 by #2) ________ (B04)

5. Number of "yes-no" items scored on posttest (add all items attempted for all exercises) ________ (B05)

6. Number of items scored "yes" on posttest (add all "yes" entries for all exercises) ________ (B06)

⑦ % of success on posttest (divide #6 by #5) ________ (B07)

⑧ % of achievement for all "yes-no" items (divide #6 by #1) ________ (B08)

B. NUMERICAL PERFORMANCE ASSESSMENTS

1. Total number of numerical items 29 (B09)

2. Number of numerical items attempted in both pretest and posttest (add summary sheets) ________ (B10)

3. Number of numerical items showing an improvement between pretest and posttest performance (add summary sheets) ________ (B11)

④ % of success in posttest (divide #3 by #2) ________ (B12)

⑤ % of achievement for all numerical items (divide #3 by #1) ________ (B13)

INTERPRETATION OF PERFORMANCE EVALUATION AND INDIVIDUAL ACHIEVEMENT (L5)

No two trainees are alike. Their differences reflect a) varied levels of maturity, b) varied levels of blindness and duration of blindness, c) varied personal and social experience, d) varied needs and goals, and e) varied skills in orientation and mobility.

Similarly, no two ETA's are alike. Their potential for improving learner performance will differ according to a) varied design features, b) compatibility of design features and trainee needs, and c) extent of training provided.

With these factors in mind, it is important to realize that no absolute "pass-fail" standard is meaningful. Rather, each trainee should be considered in terms of developed abilities that are relevant to that person. Judgments about whether an individual has reached his or her potential (insofar as ETA training is concerned) must remain at the local level. Instructor's evaluations and trainee's impressions given in the interview should both be considered.

The following checklist will help to summarize some of the major factors that should be weighed in arriving at final judgments about individual growth as a result of ETA training.

- Did the trainee accomplish a variety of training objectives or goals appropriate to his or her needs? __________ (C01)
- Is there evidence that the trainee can transfer these learned skills to environments other than the training environment? __________ (C02)
- Was there a substantial rate of success shown for the Performance Evaluation of Instructional Outcomes? __________ (C03)
- Did the trainee perform more efficiently (fewer contact errors, shorter task completion time, greater environmental awareness)? __________ (C04)
- Did the Interview suggest that the trainee was satisfied with the ETA and would be likely to use it after training? __________ (C05)
- Is the trainee now better prepared to function independently, whether for orientation and mobility purposes, vocational applications, or other living skills? __________ (C06)

Finally, it is always appropriate to acknowledge effort even where trainee growth might have been less than expected. Accordingly, it is hoped that any and all participants, whether they have realized their full potential or not, will have gained in some way from their experience in ETA training.

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DeHaas, Carla and
Robert A. Weisgerber.
ENVIRONMENTAL SENSING,
EVALUATION OF ATTAINED
PERFORMANCE.
(1978)

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